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ORIGINAL ARTICLES.

THE STUDY OF INTERNAL MEDICINE.[1]

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How shall a young man prepare himself to rise in the medical profession to a position in which his brethren lean upon his judgment and rely upon his decisions; and what steps shall he take to become as competent to wrestle with disease as those who have made their names famous in the near past, such men as Hosack, James Jackson, Daniel Drake, Swett, Alonzo Clark, Austin Flint, Henry I. Bowditch and Fordyce Barker?

At the end of the first quarter of this century there will have arisen a new set of consultants, the leaders of thought and the exponents of experience in internal medicine who will have come from the ranks of the college and hospital graduates of to-day. The question that each of these ambitious youths is now asking himself is, "How can I make my work worthy of the reputation I desire?"

Before laying down the general lines of work, that if faithfully followed may bring ultimate success it might be well to remind the anxious youth that the fame of a prominent consultant at sixty is ofttimes accompanied by a treadmill routine of work and a never-ceasing weight of responsibility that makes him look back to the days of his freedom when he could follow his bent untramelled and undisturbed with as much envy as he formerly looked forward to the days of his reputation. Joy comes in the climbing, and while living laborious days, happy in the growing recognition that he is receiving from his colleagues the young physician is realizing the best that the profession has to give.

The first decision to be made is whether or not to go abroad. It is not necessary, but it is very helpful. It gives a physician a broader foundation on which to build and a year or two in the laboratories and clinics of Europe enlarges his capacity for appreciation. To walk the wards of the famous hospitals and put in a few quiet months of study in one of the German universities will store his mind with priceless treasures, and will do more than anything else to free him from the fetters of his own opinions, and help him escape the besetting sin of most young physicians, that intolerant attitude of criticism toward everything outside of his own circle and his own school.

But he need by no means remain narrow-minded, nor lack perspective in his views if he cannot afford the time and money for a year abroad. Some of the ablest men in the profession have found their opportunities in country practice and have built up wide reputations in small towns. But if the Continent is denied him by all means let him seek the opportunities afforded to him in this country and as early as possible get the breadth of view that comes only by observation and comparison of the various methods of accomplishing the same ends. If he lives in a small city or provincial neighborhood let him make a great effort to spend a few weeks each year in Boston, Philadelphia, Chicago, New York or Baltimore, visiting hospitals and clinics and meeting the men in their societies. If he lives in one of the large cities let him by no means feel that he has all that may be acquired at his command. Short vacations spent in visiting different universities and hospitals from the Chesapeake to the St. Lawrence will stimulate to new ideas, and give him that combination of conservatism and independence that comes only with travel.

This is for his youth when the problem of ways and means is all important. But it should be but the incentive to save for further travel and study. At the end of a few years when he needs a rest and change let him invest $600 in a summer semester in Germany working quietly at one of the smaller universities and absorbing the spirit of patient investigation that is the genius of the German mind. Another year let him spend three months in Paris; lay schemes in advance and it is surprising how often the circumstances will fit them.

Poll the successful consulting physicians of this country to-day, and you will find they have been evolved either from general practice or from laboratory and clinical work; many of the most prominent having risen from the ranks of general practitioners. I once heard an eminent consultant rise in wrath because some one had made a remark reflecting upon this class. He declared that no single part of his professional experience had been of such value. But I wish to speak here of the training of men who start with the object of becoming pure physicians. From the vantage ground of more than forty years of hard work, Sir Andrew Clark told me that he had striven ten years for bread, ten years for bread and butter, and twenty years for cakes and ale: and this is really a very good partition of the life of the student of internal medicine, of some at least, since all do not reach the last stage.

But how shall the young man gain even his

[1] In part a résumé of an address on "Internal Medicine as a Vocation," delivered at the New York Academy of Medicine.

dry bread during the first few years of his professional career? By picking up the crumbs that fall from the practice of the older men who can always put something in the hands of an able youngster, by fees from classes, journal work, private instruction, work from the schools, night work, surplus work in busy seasons, by taking poor or chronic patients that the older man cannot spare time to attend, by keeping office hours for the scanty summer practice of the wealthy physician who is taking his holiday; in short by taking every sort of medical practice that comes to hand, for to see disease is the main thing and a man must be willing to treat disease where he can find it, even though he barely ekes out a living while he is gaining his experience. He should stick closely to the dispensaries, for a first-class reputation may be built up in them that will pay in later days and will bring experience that can be gained in no other way. In the meantime these will afford valuable material for papers for medical societies and for publication in scientific journals. But the young physician should be careful how and where he writes, placing himself under the guidance of his seniors and endeavoring to do a little careful work that is needed in some particular branch, instead of attempting anything that is startlingly original. Byron Bramwell collected most of the material for his Atlas of Medicine while he was an assistant physician in the Royal Infirmary, Edinburgh. Many of the best men in London have served from ten to twenty years in out-patient departments before getting wards. In this country long and faithful service in a hospital dispensary is not necessarily awarded by any position of honor or influence on the hospital staff, but the experience and the reputation and the fraternal relations are invaluable. Once established as a clinical assistant a young man has the material with which to work out his own education.

There are three lines of work which he may follow, all of the most intense interest, all of the greatest value to him—chemistry, physiology, and morbid anatomy. Professional chemists look askance at physiological chemistry, and physiological chemists criticize pretty sharply the work of some clinical chemists, but there can be no doubt of the value to the physician of a very thorough training in methods and ways of organic chemistry. We sorely want in this country, men of this line of training, and the outlook for them has never before been so bright. If at the start he has not had a good chemical training, the other lines should be more closely followed.

Physiology, which for him will mean very largely experimental therapeutics and experimental pathology, will open a wider view and render possible a deeper grasp of the problems of disease. To Traube and men of his stamp, the physiological clinicians, this generation owes much more than to the chemical or postmortem-room group. The training is more difficult to get, and nowadays when physiology is cultivated as a specialty few physicians will graduate into clinical medicine directly from the laboratory. On the other hand, the opportunities for work are now more numerous, and the training which a young fellow gets in a laboratory controlled by a pure physiologist will help to give that scientific impress, which is only enduring when early received. A thorough chemical training and a complete equipment in methods of experimental research are less often met with in the clinical physician than a good practical knowledge of morbid anatomy, and, if our prospective consultant has to limit his work, chemistry and physiology should yield to the claims of the dead-house. In this dry-bread period he should see autopsies daily, if possible. Successful knowledge of the infinite variations of disease can only be obtained by a prolonged study of morbid anatomy. Of special value in training the physician in diagnosis, it also enables him to correct his mistakes, and, if he reads its lessons aright, it may serve to keep him humble.

It would be folly to suppose that every bright and energetic young physician can attain that widest of reputations in which his name becomes familiar to the laity of this continent and to the profession of Europe. That is not the point he is striving for, and should he attain it he would find himself at the mercy of an exacting public with an enormous and irksome practice, and not time to keep abreast of, and much less lead the thought of the times. A professional reputation in even a restricted area affords an excellent income and a satisfactory life-work to those who care to be masters of their own fate and not public slaves. With the present overcrowding of the large cities and the keen competition among physicians the tendency will be more and more to drive the younger men into the small towns which have hitherto sent their best talent to the city and received no adequate return. There are throughout the country hundreds of small hospitals whose clinical opportunities are wasted for lack of younger men who will do with their might whatsoever their hands find to do. These are well worth the consideration of the graduates who are just ready to begin their practice and who realize that to settle in one of the large cities means a desperate struggle for a livelihood. With capital or the promised coöperation of a well-established physician or with a grim bulldog tenacity the young doctor can live through the educational years of his practice and begin to reap the benefits in the forties. But for the young man whose only capital is brains and whose only backing is his belief in his own powers of work the same town affords an opportunity to do work that is just as valuable to the community and to build up a reputation that is of far more help to his professional brethren than the reputations of the far-away great consultants.

To any young man who is just starting the practice of medicine in a town, say of 40,000 to 50,000 inhabitants, and whose ambition it is to work up a consultant practice, I would say, "If

you have brains and staying powers and can avoid entanglements you will probably succeed; but to do so you must make your position by hard work, courteous manners and a close study of human nature. Say to those that ask that you intend to practise medicine only and will not take surgical and obstetrical cases. If you have an opportunity to work in a dispensary or to do any teaching, take the opportunity gladly and give full measure. Your services may be of help in the local hospital. A little blood work or pathological or microscopical examinations, if done voluntarily in a modest grateful spirit, may win you an opening to assist some of the house physicians in his ward work, but in this case be careful that you do not scintillate before the staff in the glory of your recently-acquired knowledge. It will be enough to be in the right occasionally without calling attention to the fact. Get your own little clinical laboratory in order and do not try to impress the physicians who call upon you with your very up-to-date equipment. Remember that they have brought a generation into the world and kept it in health, they have staunch friends and rich patients and are ready to take you into their fraternity if you are civil and modest. Join the city and county societies and never miss a meeting, but keep your mouth shut for a few years, particularly in the discussions; read the journals, but do not discuss the new books before you are grounded in the old ones.

At the end of twenty years, when about forty-five years of age, the man who has worked wisely and well should have a first-class reputation in the profession and a large circle of friends and patients. He will probably have precious little capital in the bank, but a very large accumulation of interest bearing funds in his brain pan. He will have gathered a stock of special knowledge which his friends in the profession appreciate, and they will begin to seek his counsel in doubtful cases and gradually to lean upon him in times of trial. He may awake some day, perhaps quite suddenly, to find that twenty years of quiet work, done for the love of it, has a very solid value.

THE RELATION OF THE STUDENT OF MEDICINE AND THE RECENT GRADUATE TO THE FIELD OF SURGERY.

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IT is a noticeable fact that the majority of medical students commence rather early in their student career to evince a fondness for surgery. This is partly due to the glamor and intensely dramatic surroundings of the surgical clinic which appeal to the sensibilities and susceptibilities of their yet undeveloped professional minds; partly to the old traditional, and yet in great measure unfounded, want of certainty attending the therapeutic effects of drugs, and the supposed certainty of results following a surgical operation; and finally, to the belief that, in the field of surgery the larger opportunity is offered for the application of the anatomical knowledge the gaining of which forms so large a portion of their work in the early part of the college curriculum.

As the field of study broadens before the student of medicine, and his mind undergoes those evolutionary changes incident to the grasping of new phases of the healing art, the narrow mindedness which, in the beginning prompted him to envy the surgeon the supposed éclat of his surroundings progressively diminishes, until finally, between the admiration excited for the acumen of the skilled medical diagnostician, and the zeal and solicitude essential to the conscientious discharge of the duties of the obstetrician, he wavers, and finally, if he is faithful in his work and earnest in his desire to equip himself for his lifework, he will endeavor to store his mind with every available item of knowledge to be gleaned from lectures, demonstrations, clinics, reading, and dissecting-room and laboratory work.

Should the fondness for the surgical still cling, however, in spite of the awakening of admiration for the great minds which are constantly developing new facts, or advancing fresh theories in the other branches, he will realize that the surgeon, after all, is but an accomplished physician with a trained hand and a readiness to employ mechanical resources in special conditions. The fact becomes more and more impressed upon him that, in the field of surgery, a full and complete knowledge of all of the resources of the medical art are essential to the successful practice of this branch. He no longer looks forth upon a great barren waste with one bright oasis toward which he must make a short cut; but rather he gazes upon broad and richly cultivated fields of thought, each one of which invites him to linger and taste of the inspiration of its well-spring, and enjoy its intellectual repasts.

When he has reached this stage, if the old ambition still prompts him and he feels that he must accomplish the ideal of his early student days, with a full realization of the conditions of the environment of the surgeon he will no longer aim to reach the goal by a straight path with sharply-defined boundaries, but, on the contrary, he will make excursions in each of the fields that opportunity throws in his way, with the well-grounded belief that these will, in time, furnish him with additional incentive for endeavor, supply him with fresh food for thought, and, in addition, increase his equipment for his work as a surgeon.

Upon graduation day he steps in the midst of the workers. The time has come when he must join them. His mind is still fixed upon working in the field of the surgeons. How can he best gain that further knowledge which will

enable him to range himself side by side with the Astley Coopers and Valentine Motts of his earlier day-dreams? Surely not by casting aside four-fifths of the equipment of which he is already possessed in the endeavor to gain the trained hand and mechanical skill of the surgeon of his boyish imagination. That were indeed a profligate course; he cannot afford to relinquish his hold upon any of the knowledge gained in order to grasp what, after all, may be to him but a shadow. He must hold fast to that which he has gained, for it is his main dependence; the ground-work and foundation of that superstructure he hopes to build. But knowledge, to remain fresh and available, must be put to use, and thus become in time part and parcel of his being. How shall he put it to use in order that it may be firmly engrafted and come to bear fruit?

Two courses are open to him in order that he may make practical use of the knowledge already gained, in order to conserve it for future use by strengthening its all-too-precarious hold in the soil of his mind, by the lessons of experience. He may enter at first the field of general medicine, where opportunities occur here and there, through the diversified character of the work which will come to him, for the application of the surgical portion of the teaching of his student life. But he will soon realize that, although many cases in the field of internal medicine will come to him which will possess no interest from the surgical standpoint, the surgical cases will be few and far between. But of these the greatest rarity will be a case which has no interest from the purely medical standpoint. But art is long and time is fleeting. Exceptionally there may fall in his way, through the rapid building up of a large *clientèle*, opportunities for doing surgical work to the extent of increasing his self-confidence, and if he is wise he will endeavor to supplement this by practising operations upon animals. Later on he will be justified in relinquishing the work in internal medicine that comes to him to others and devoting a larger share of his time to the cultivation of the surgical branch. But the transition must be gradual; advances cannot be made by leaps and bounds. He must increase his store of knowledge in every branch of professional work while at the same time he is training his hand and cultivating mechanical skill.

The mere fact that he turns away medical work in order to pay more attention to his surgical cases will cause the latter class of work to gravitate to him, and this circumstance will also increase the confidence of his fellow practitioners in his earnestness as well as honesty of purpose. This confidence will prove, in the long run, the most important factor in his success as a surgeon, and will naturally result in a demand for his services as a consultant, as well as his selection for a position upon the surgical staff of some hospital. While the attainment of the latter will be a most desirable incident of his life, for by means of it he will find larger opportunities for the exercise of his surgical skill, yet he will do well to remember that he should only seek such promotion by deserving it; other than this the position should always seek the man.

While financial considerations may compel him to follow the course above outlined, he may well feel that it is not the best. The other course is to enter the competitive examination for an interneship in some large hospital, and there win his way to a field in which he may work with the greatest possible advantage from any standpoint. A hospital in which he may serve both as a medical and surgical interne will be found to offer him the best opportunities. Here, while he will be thrown to a certain extent upon his own resources of knowledge, at the same time he will be brought in contact with men of large experience, both in the medical and surgical branches of the profession. The medical service will serve the same purpose as an experience in private practice, with the additional advantage that this experience will have been gained in a much shorter space of time, and under proper guidance, thus greatly enhancing its value. At the same time he will be brought into contact with the surgical work of the hospital, if only in a minor capacity. In any event he may be an onlooker in relation to surgical matters while serving as a medical interne, and even this has its advantages. It is probable, however, that he will take a more or less active part in the emergency surgical work, at least. In hospitals in which the professional organization is such that it is intended that the internes should familiarize themselves with the hospital work by such rotation in service as shall give them a subordinate position in first one service and then the other, becoming house physician before becoming house surgeon, the best advantages are gained for the internes themselves.

When the position of house surgeon has been gained the opportunity of the man, who has surgical aspirations and who has endeavored in every way to live up to the preparatory requirements, has arrived, and he will lose no chance of availing himself of it to the utmost. Here he becomes one of the direct assistants and co-workers of the masters in the art in which he is endeavoring to perfect himself. By his quickness in adapting himself to the exigencies in the operating-room he will inspire confidence on the part of his chief, and by this and his intelligent care of the cases in the surgical wards he will be entrusted with a share of operative work and the more or less complete control of the after-treatment. This will prove a most valuable aid to him, not only in the experience actually gained, but in the self-confidence inspired.

A trained hand will be developed in such actual manipulative work as will be assigned to him, from the holding of a retractor and sponging to the clamping and tying of vessels. Mechanical skill comes with the application of fixed dressings and apparatus. The permission now and then from his chief to operate upon emergency cases, the number of these depending upon the confidence inspired by his behavior while assisting, all go a long way toward making him a trustworthy surgeon.

With the termination of his hospital service his chief may have become so impressed with his availability as an assistant as to place him in the way of becoming a regular assistant at the hospital clinic. If the work in the hospital has been such as to give opportunities for acquiring practical knowledge in the bacteriological and pathological laboratory, so much the better. If not he should seek to supply this deficiency, for he has now come to the point when he must put on the finishing touches, so to speak, of a preparation which, while it does not make a surgeon of him, is designed to teach him how he may become a surgeon. He will now spend a year in the practical work of some pathological institute, either at home or abroad. If he has a taste for foreign languages, and has already acquired some knowledge of German or French, he may spend this time profitably either in Berlin or Vienna, or in Paris. The constantly increasing facilities for following up the work in our own country, however, are such as to make it extremely profitable for him to pursue his studies here, particularly if his knowledge of languages is limited to English. Or, if he is desirous of combining his studies in this line with a residence abroad for a time, he will find excellent opportunities in London. If he has followed up his work as an interne closely he will have felt the need of more knowledge of surgical pathology and bacteriology, and will enter upon this portion of his work with increased zeal and enthusiasm.

The final culmination of his efforts to prepare himself for surgical work will be the securing of a place in the service of a hospital surgeon as an assistant, in which position a decade may be spent with profit. As time goes on he will be entrusted more and more with important surgical work. In the very nature of things vacancies must occur upon the surgical staff of the hospital with which his chief is connected, in which case he will have made himself so necessary to the work of the institution that his promotion will follow as a matter of course. During this decade of his life no opportunity must be lost of gaining knowledge of most approved methods, not only as these develop in the work as done by his chief, but by a close study of current surgical literature, and watching, as opportunity offers, the work of other surgeons. An occasional visit to the surgical clinics of the medical centers of this country, as well as those abroad, forms a very profitable and at the same time enjoyable way of taking short vacations to the aspirant for surgical honors.

Above all things he should not fail to form habits of systematizing his knowledge, and of practising self-criticism. A faithful record of work done and a judicious selection of this for publication are of inestimable value. This will bring him work to do on his own account, and at the same time enrich the literature of his profession. While some practice will come to him through his chief, more will come from other sources. Likewise a recognition of the character of his work from outside the institution in which he works with his chief may, and frequently does lead to a consideration of his eligibility for appointment in some other hospital as attending surgeon. He will lose nothing, however, but on the contrary will be largely the gainer by a consistent loyalty to the chief who recognized his ambition and made it possible for him to become a surgeon.

At last he is a worker in the field of surgery. He may or may not become the originator of difficult or brilliant surgical procedures, but if he attains to good judgment, as based upon a cultivation of powers of observation and proper discrimination, combined with the experience which will certainly come to him, he will be trusted by his colleagues. When the profession trusts him, the public will have confidence in him, and when these have been reached he will have become a surgeon.

THE MEDICAL MAN IN THE NAVY.

BY W. K. VAN REYPEN, M.D.,

SURGEON-GENERAL OF THE UNITED STATES NAVY.

The Medical Corps of the Navy is recruited directly from civil life. Any man who is a citizen of the United States and between twenty-one and thirty years of age can obtain the permit to appear before a Naval Medical Examining Board by making application in the prescribed form and submitting at the same time suitable certificates from persons of good repute, testifying from personal knowledge as to his good habits, moral character, and citizenship.

Recognizing the responsibilities of the men chosen to safeguard the health of the personnel of this rapidly growing and very important branch of the public service, and the necessity for ability in the treatment of disease and injury, the Government has wisely made the test for admission to this Corps one simply of merit, eliminating political and other influences and conferring the privileges of a commission in the Medical Corps upon any citizen of the United States within the limitations of age specified and having those requirements neces-

sary for the successful practice of the medical profession under the flag afloat.

With this end in view, the Navy Department has adopted simple methods that all proper candidates, from whatever part of our country, may easily obtain the desired examination at any time and be impartially considered by a board of officers composed of members of the Corps desirous of affording every opportunity for the exhibition of those qualities of body and mind which are necessary for a useful naval life. For this purpose two Examining Boards are kept constantly organized—one at the Naval Laboratory and Department of Instruction, Brooklyn, N. Y., and the other at the Naval Hospital, Mare Island, California. Both of these boards conduct the examination in accordance with instructions issued by the Surgeon-General of the Navy, who also willingly sends to any person making application an official circular containing such information as may be necessary for his guidance.

Each Board is composed of three medical men who, while impressed with the importance of the duty assigned them and required under oath, to report on the physical, mental, moral and professional qualifications of each candidate, recognize the defects in all systems of examination for the proper appraisement of mental value and, therefore, endeavor to conduct the candidate in a simple and practical way over ground that should be very familiar to him if he has been a reasonably honest student of medicine and has exercised judgment and discretion in his work. Indeed the Board does not object to being led by the candidate to a certain extent in some directions in which the natural bent of his mind may have carried him, for it is the individual who is being appraised rather than the system of examination.

The order of examination is as follows: (1) Physical. (2) Written. (3) Oral. (4) Clinical. (5) Practical.

1. The physical examination is necessarily thorough, for the candidate is seeking a position which he usually desires to hold for life. The question involved is, however, not simply one relating to probable length of life, but more especially to continued physical ability to perform duty, for an officer is paid when sick and, when permanently incapitated for active naval service on account of physical disability, has the privileges of the Retired List, where, if his disability has been an incident of service, or his retirement is on account of age, he receives as much as seventy-five per cent. of the pay at sea. This is a very important consideration in connection with the subject of pay in the Navy, for, while the following table designates the various grades of the Medical Corps and the pay received in each grade, it should be regarded in relation to the provisions for retirement for disability, or for age, 62 being the limit of age on the Active List.

PAY TABLE.

	At Sea.	On Shore.	Allowances per Annum.[2]
Assistant Surgeons:			
Rank of Lieutenant (junior grade)[1].	$1,650.00	$1,402.50	$288.00
Passed Assistant Surgeons:			
Rank of Lieutenant (junior grade)..	1,640.00	1,402.50	288.00
After five years in the Service	1,800.00	1,530.00	288.00
Rank of Lieutenant.....	1,980.00	1,683.00	432.00
After five years in the Service....	2,100.00	1,836.00	432.00
After ten years in the Service.....	2,340.00	1,989.00	432.00
Surgeons:			
Rank of Lieutenant—			
After ten years in the Service.....	2,340.00	1,989.00	4 2.00
After fifteen years in the Service.	2,520.00	2,142.00	432.00
Rank of Lieutenant-Commander—			
After ten years in the Service.....	3,250.00	2,762.50	576.00
After fifteen years in the Service.	3,500.00	2,975.00	576.00
Medical Inspectors:			
Rank of Commander—			
After fifteen years in the Service.	4,000.00	3,400.00	576.00
Medical Directors:			
Rank of Captain—			
After fifteen years in the Service.	4,500.00	3,825.00	720.00
Surgeon-General:			
Rank of Rear-Admiral.....	5,500.00	5,500.00	720.00

2. In the written examination the candidate is required to address a letter to the Board of Examiners, stating the date and place of his birth; the school or college at which he received his general education; the medical school or schools at which he received instruction, and, if an alumnus, the date of his graduation, and the time when he commenced the study of medicine, also the titles of the textbooks studied; the opportunities he has had in engaging in the practice of his profession; and whether he has or has not been a resident physician or interne in a hospital. To this letter the candidate appends his name in full, post-office address, and his local address at the time of the examination.

He next prepares a thesis or short essay (without reference to notes or books) upon some professional subject indicated by the Board, and then makes written answers to questions on the usual professional subjects, including hygiene and quarantine, and on the usual general educational branches.

3. The oral examination is upon general educational subjects and the usual professional branches, including hygiene and microscopy.

4. The clinical examination of patients is made at a naval hospital and includes the use of the microscope, thermometer, laryngoscope, ophthalmoscope, and other aids to physical diagnosis. A written report is then made on one or more cases.

5. The practical examination comprises surgical operations on the cadaver, the applica-

[1] Designations of rank in the Navy differ from those employed in the Army. Lieutenant (junior grade), Lieutenant, Lieutenant-Commander, Commander, Captain, and Rear-Admiral, correspond respectively with the following ranks in the Army: First Lieutenant, Captain, Major, Lieutenant-Colonel, Colonel, and Brigadier-General.

[2] Only when quarters are not furnished by the Government. There is also an allowance of eight cents a mile to officers traveling under orders.

tion of splints, bandages, and surgical dressings, the use of the microscope (for clinical purposes and the recognition of pathological and other specimens), and chemical and pharmaceutical manipulations.

With reference to the amount of general education considered necessary by the Board it should be considered that all naval officers are representatives of their country in other lands, where a welcome is extended to them by representative people. The social life of a Medical Officer of the Navy is also regarded in relation to members of the other naval corps who are assembled on each ship and station and with whom the medical man in the Navy is associated in various duties and necessarily more or less intimately in every-day life. Apart, therefore, from the usual consideration that a medical education should rest upon the foundation of a fair general education, it is apparent that a medical officer of the Navy should for many other reasons be a well-educated physician.

The Board recognizes the necessity for this requirement, but, avoiding all extremes, seeks simply to maintain such a standard in the Corps that its members may be regarded worthy of attention not only professionally, but also from the general educational point of view, considering that in naval as in civil life both are of mutual assistance and more or less necessary for a reasonable success. The examination in that direction is, therefore, carried only sufficiently far to determine whether the candidate could maintain the general position advisable for a successful life as a medical man in the Navy. Of course, however, if the applicant seeks credit for advanced work on general educational subjects, opportunity is afforded him to obtain the additional credit.

The application for permission to appear before the Board must be in the handwriting of the applicant and addressed to the Honorable Secretary of the Navy. The form of application is as follows:

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Sir: I request permission to be examined for an appointment as Assistant Surgeon in the United States Navy.

I was born at ....., and was ..... years of age on the .....day of ....., 190, and am a citizen of the United States, residing in ....., county of ....., in the State of.....

I enclose herewith certificates as to moral character, habits, and citizenship.

Very respectfully,

.....

The Honorable SECRETARY OF THE NAVY.
Navy Department, Washington, D. C.

When in reply to this application the candidate receives a permit he is expected to notify the President of the Board, before which he is authorized to appear, of that fact and request to have a date fixed for the examination. He is also expected to present to the Board testimonials of educational and professional fitness. No allowance is made for the expenses of persons undergoing examination, which, if uninterrupted, is usually completed within ten days. A candidate may withdraw at any period of the examination, with the consent of the Board, and may, at a future time, present himself for reexamination.

The examination is not conducted in classes though several candidates may be before the Board at the same time. It is not therefore usually competitive in any sense but when two or more applicants happen to be awaiting appointment at the same time the commissions are conferred in the order of merit reported by the Board. After a successful examination appointment as Assistant Surgeon is made without delay for, though the membership of the Corps is limited by law and no such appointments can be made except to fill vacancies, there are as a matter of fact always some vacancies. This is especially prominent at this time, for the number of members allowed the Corps has been recently increased by act of Congress, owing to the rapid increase of the Navy and consequently the growing importance of this branch of the service. As a result there are now fifteen vacancies in the Medical Corps which with recent legislation favorable to the Corps and the advantages incident to a commission in the service afford opportunities for successful professional careers.

The order of appointment is of considerable consequence in a Corps in which the number in most of the grades is limited, with vacancies in those grades filled in the order of seniority after the physical and professional examination required by law. It is, therefore, of value to the applicant for admission to the Corps to appear before the Board at the earliest practicable date, as, if successful, he thus secures a higher place on the list, becoming senior to those subsequently appointed.

While promotion from one grade to another is, as a rule, to fill a vacancy in the upper grade caused by death, or retirement for age or disability, there is a very important exception in the entrance grade, that of Assistant Surgeon, from which promotion, after successful examination, is assured at the end of three years, the Assistant Surgeon becoming a Passed Assistant Surgeon.

The rank of an assistant surgeon is that of lieutenant (junior grade)—a naval rank corresponding with first lieutenant in the Army. This rank conferred upon the medical man in the Navy at the start is the result of recent legislation and represents a most important advance, making the Corps much more attractive and desirable, as the increase in rank carries with it an increase in pay and also removes the old objections to the life of an assistant surgeon which caused more or less discontent and acted as a deterrent to some in civil life who would otherwise have eagerly sought admission to the Corps.

The lowest commissioned rank in the Navy is that of ensign, corresponding with that of second lieutenant in the Army. This is the rank which an officer in the Line attains after six years' service—four years at the Naval Academy and two years at sea. Formerly an assistant surgeon entered with that rank and thus by regulation was placed in the junior officers' quarters. Now, entering with the higher rank, he becomes at once a senior officer —a wardroom officer with all the privileges incident thereto, including quarters to himself. This makes possible the privacy and comforts so valuable and desirable in life while afloat, and places the medical officer from the commencement of his career in a position consonant with his age, habits of thought, and responsibilities.

The old days have passed and there is a new era in naval medical life at a time when there is a new Navy, increasing each year in men and ships. No branch of the public service of our country has a more glorious and consistent history than the Navy and there is no branch which confers as a heritage greater distinction upon its members. The only way in which a future as great or greater can be secured is by as great or greater merit, and that this should be the test for admission to the Medical Corps should be regarded with favor by all who consider themselves worthy, as it ensures a Corps that honors and provides an incentive to achieve distinction within it; for, in the naval community as in others there are individuals differing in standing and some who make more of professional and other opportunities than others.

The conditions of naval life include travel at home and abroad, with a period at sea and a period on shore in one's own country, with duty in the various naval hospitals or at the different shore stations. When afloat one becomes familiar with foreign countries and diverse peoples, and acquires in time that wide education generally regarded as incident to travel. Steam has shortened the time between ports and thus relieved naval life of much of the monotony of former days. The opportunities have increased for a personal acquaintance with the diseases of different climates and the methods employed in medicine and surgery by medical men of different nationalities. In military surgery there have been at times opportunities for work apart from naval service, as when the medical officers of ships of various nations established a temporary hospital on shore to care for the wounded of both contending parties in a country the subject of revolution.

While at first the change from civil to naval life may be somewhat confusing, in time there is a recognition that it has brought its own peculiar problems from a professional point of view which require special thought and training. The routine of the naval medical officer's life includes not only the treatment of disease and injury, at times under unusual circumstances and without professional aid or advice, but also involves questions of the care of wounded in battle with transportation on board ships differing in construction; unusual hygienic problems of great importance; a thorough acquaintance with the state of health in the selection of recruits; and a knowledge of the seafaring mind and conditions of life at sea in connection with their relation to disease and perhaps to malingering in its various degrees.

These are in a broad way some of the various lines of medical work, the ever-changing conditions, the ever-changing surroundings at sea, different ports and different cities with varying influences stimulating medical observation primarily with a view to the care of men under supervision; for a ship of the Navy is a floating fort crowded with men, and the medical mind in its own department has opportunities for a wide range in human experiences and no small share in the responsibilities of life.

And so in view of all the circumstances it seems very just and proper that the commission signed and conferred by the President of the United States reads in part as follows:

"Know Ye, that reposing special Trust and Confidence in the Patriotism, Valour, Fidelity and Abilities of .....,
I have nominated, and by and with the advice and consent of the Senate, do appoint him an Assistant Surgeon in the Navy with the rank of Lieutenant Junior Grade, from the ..... day of .....190 , in the service of the United States."

THE MUNICIPAL HEALTH DEPARTMENT SYSTEM, AND MORE ESPECIALLY IN REFERENCE TO ITS ADVANTAGES AND DISADVANTAGES AS AN OPENING FOR THE YOUNG MEDICAL GRADUATE.[1]

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MODERN sanitary science and preventive medicine are slowly, but surely reducing not only the mortality from, but also the prevalence of, disease. This is a fact which cannot be denied; it is proven by the official records of vital statistics, and is apparently evidenced no less by the waning private practice of physicians. In former times four-fifths of all deaths and a corresponding number of diseases were due to preventable causes; but

[1] In the compilation of this article I have made liberal use of the excellent addresses by H. M. Biggs, M.D., on "Preventive Medicine in the City of New York" (1897), and "Sanitary Science, the Medical Profession, and the Public" (1898), as well as of the official reports of the New York City Department of Health.

now, owing to the general adoption of improved methods of hygiene, both public and personal, the death-rate and, at the same time, the frequency of sickness have been reduced to one-quarter of what they once were, and although much remains to be done in this direction, there is little doubt but that in the present generation we shall see a still further reduction of distinctly preventable diseases of at least one-third more.

The consideration of this fact, together with another equally as manifest, namely that of increasing competition in the art of healing, not only within the ranks of the regular medical profession along with its adjuncts the hospitals, dispensaries and clinics, but also outside the profession with the quacks and charlatans, Divine-Healers, Faith-Healers, Christian-Scientists, Osteopaths, and other fashionable sects of that ilk, who, although not more numerous to-day perhaps than in times past, still count their votaries by the thousands: I say that the contemplation of these indisputable facts may well make us pause, old as well as young medical graduates, and ask wonderingly, what are the chances of success in the practice of legitimate medicine?

Of course, in writing of the "chances of success," it is not intended to imply the accumulation of wealth, for it stands to reason, now as ever, that no man is fitted for the study of medicine who expects to grow rich through its practice. Such a one is by nature a merchant and should go into trade; and luckily, both for the good of the calling in general and for that of practitioners individually, the mercenary spirit is comparatively rare in the medical profession, inasmuch as this class of men usually find out very soon after graduation that medicine, like virtue, often is its own reward, and look for other and more lucrative employment. Neither is it meant to include physicians possessed of private incomes who are independent of their profession, and who while "waiting for a practice" may advantageously employ their unlimited spare time in attending hospitals and clinics at home or abroad, and in the acquisition of skill and experience, in the various specialties of medicine and surgery, although they receive no remuneration for their labors. Nor is reference made to the country doctor, who prefers to "lead the even tenor of his way" (thus wisely choosing perhaps) as a practitioner in the rural districts, where, though the financial prospects may not be brilliant, better opportunities are not infrequently afforded for an immediate return for medical service.

But granted that our young medical graduate is in the pursuit merely of a modest livelihood, that he is possessed of the suitable character and ability, the requisite energy, perserverance, and, above all, love for his profession, to enable him to bear the brunts and buffets of its early disappointments and misfortunes; and that he is poor, but ambitious of honor and the prizes which are to be worn only amid "the madding crowd's ignoble strife"; what available opening is there for him in a large city?

It must be confessed at the outset that the picture presents no very attractive features in the foreground, although the distance hidden from view conceals, for all we know, the poet's land of Eldorado, and some who seek may find it. But to speak unmetaphorically, there is one line of work which may offer a possible opening to the young medical graduate, or to some of them at least, and as such I would draw favorable attention to it. I do this, moreover, with the greater confidence, because of my own experience, and because it is a line of work which is as yet comparatively new, and therefore not quite so overstocked as many other branches of medicine, and last but not least, on account of its emoluments, which though small are reasonably sure: I mean the municipal health department system and the study of sanitary science.

What is the health department system, and what are its status and its duties? These questions are often asked and imperfectly answered, and hence a false idea is apt to be conceived of the true nature of the work with which Health Departments have to deal.

The modern health department system as it now exists in our large cities—there is no National health department in this country, although many States have their departments of health—is a centralized, autocratic organization under municipal control, designed for the care of the public health. The word *autocratic,* and the acts which it involves, would be inimical, seemingly, to our principles as citizens of a democracy. Nevertheless in this Republic of ours the growing tendency of the times is evidently toward centralization and combination of wealth and power. Witness, not only the health department system, but the many other systems and syndicates, the giant trusts and monopolies in trade, political bossism, etc. A few of us may declaim against this tendency as denoting an infringement of the rights of the individual, a restriction of personal freedom, a destruction of competition, and so on; but, however, this may be in the main, the concentration of authority when it is plainly designed for the common good, as in matters pertaining to the public health, is not only accepted but welcomed by the people, despite its exercise of arbitrary power, on account of its certainly beneficient results, and this—as Dr. Biggs suggests in his Address on Public Medicine, delivered at the Sixty-fifth Annual Meeting of the British Medical Association—simply because our Government is democratic. *Pro bono publico.*

In like manner, not only here but everywhere, all broad-minded men, legislators and statesmen who have their country's welfare

and progress at heart, favor and encourage the public health department system. To quote the memorable words of Disraeli, England's great prime-minister, during a discussion in the British Parliament of a bill for the protection of the public health: "The public health is the foundation on which repose the happiness of the people and the power of a country. The care of the public health is the first duty of a statesman."

Nor are physicians on the whole really opposed to the health department system, although some may consider it to be against their interests to promote an organization which aims to prevent disease. Dr. Oliver Wendell Holmes once humorously remarked that "Physicians naturally desire for their patients great longevity with frequent illness"; and it has been said that "no medical practitioners, whose livelihood depends upon sickness, are likely to exert themselves in exterminating it." But the history of sanitary science, which is indissolubly connected with that of medicine, clearly shows this expression of opinion to be a libel on the profession; for the greatest achievements of hygiene or preventive medicine are the result almost entirely of the work, investigations and discoveries of medical men, and no class or profession has done so much for the preservation and prolongation of human life as the medical profession.

Let us look for a moment at the scope and character of the work, as shown by the functions performed by sanitary authorities. In its broadest interpretation, everything which is detrimental to health or dangerous to life may appropriately be regarded as coming within their province; and even those things which improperly or unnecessarily interfere with the comfort and enjoyment of life may also be rightly said to be the subject of their consideration and action. The duties of sanitary authorities, therefore, are far-reaching and complex in their nature. Primarily, they must insure to the community and to each individual an abundant supply of pure air, light and water, and wholesome food. The preservation of the purity of the air and the furnishing of an abundance of light and ventilation, involves comprehensive measures relating to the character of the habitations, their construction, their cleanliness and the cleanliness of their surroundings; the provision of efficient plumbing; good sewerage; sufficient air-space, and the prevention of overcrowding; protection against noxious vapors or odors arising from offensive trades, slaughter-houses, gas-works, decomposing animal and vegetable matter, and the purity of the atmosphere from suspended solid particles. It is also incumbent upon the sanitary authorities to prevent adulteration and to guarantee the wholesomeness of food—meat, milk, fish, fruit, and general articles of consumption. The purity and quality of various drinks must be inquired into, and the relative food values of different products determined. Beside special inspections relating to plumbing, ventilation, overcrowding, inspections of food, etc., there are also general inspections relating to street excavations, wells, privies, stables, the conditions surrounding the removal of garbage and dead animals, the conditions in public places and places of assembly, the manner and place of burial, etc. Another special feature of the work relates to the restriction and prevention of the infectious diseases, the inspection of reported cases, and the quarantine of patients affected with contagious affections and their removal to hospital when required; and the disinfection of infected premises, clothing, etc.

It is evident, from this brief survey of the functions of sanitary authorities, not only that the scope of the work is broad, but that the knowledge requisite for the discharge of the duties of medical health officer is comprehensive and for the most part totally unlike that required for medical practitioners. How is this knowledge to be acquired? Unfortunately there are as yet no schools in this country for the education and training of men in matters pertaining to public health. In consequence of this want, the necessary knowledge can only be obtained at present by actual service under the municipal health department system of one of our large cities.

As an illustration of this system, how it is organized, how appointments are made, what salaries are paid, and what advantages may be gained through the position of medical health officer, it may be interesting and instructive to describe shortly the organization of the New York City Department of Health, which may serve as a type of the best municipal health department systems in the United States.

The Board of Health of New York City (the Greater City of New York since 1898) is now composed of five members, namely, the President, who is the chief executive officer; two Commissioners of Health, who must be physicians (these three being appointed by the Mayor of the City), and two *ex-officio* members—the Health Officer of the Port of New York (who is a State officer nominated by the Governor) and the Police Commissioner of New York City (the latter being added to bring the Police Department and the Department of Health in closer relation to one another). The Board of Health has jurisdiction over the entire city of Greater New York, as it at present exists, with a population of over three and one-quarter million inhabitants. All of the administrative and executive work of the Department is concentrated at its main offices at 969 Sixth Avenue, and is carried on under the immediate direction of the chiefs of the various divisions into which the Department is divided.

The Sanitary Bureau is under the charge of the Sanitary Superintendent, who, as its chief

executive officer, has to do with the general supervision of the sanitary work of the Department, the enforcement of the provisions of the several sections of the Sanitary Code, and the laws and ordinances relating to tenement and lodging-houses, and generally the laws relating to the health of the city. This Bureau is subdivided as follows:

First Division, general and special sanitary inspection.

Second Division, contagious diseases and medical sanitary inspection.

Third Division, food inspection, offensive trades, etc.

Fourth Division, pathology and bacteriology.

Fifth Division, medical school inspection.

Sixth Division, marine inspection.

The Bureau of Records is in charge of the Registrar of Records and is entrusted with the registration of births, marriages, and deaths, the granting of burial permits, the study of topographical causes of disease and circumstances of unusual deaths, and, incidentally, the classification and filling of vital statistics.

There are also four hospitals under the control of the Board of Health, namely, the Willard Parker Hospital, the Reception Hospital, the Riverside Hospital (North Brother Island), and the Kingston Avenue Hospital (Brooklyn), which are devoted to the reception and care of those suffering from contagious diseases.

Each of the Boroughs of New York, Brooklyn, Queens, and Richmond, has its special health officers who act as deputies or assistants of the respective chiefs of the divisions, and each of the divisions and subdivisions of the Health Department has also its special employees, inspectors, etc., amounting in all (including hospital employees) to nearly eight hundred persons. Of these over three hundred are physicians. The medical corps, in which we are principally interested here, include the district medical inspectors, the district and special vaccinators, the inspectors for the administration of antitoxin, the diagnosticians, the bacteriologists, the medical school inspectors, and several special inspectors of disinfection of lodging-houses and public institutions. These various corps, with the exception of the summer corps and the school inspectors, are permanent and are on duty throughout the year. The medical school inspectors are on duty through the school year, and the work of the summer corps is limited to July and August.

Appointments to the New York City Department of Health being governed by the Civil Service rules, none of the positions above mentioned is obtainable except by competitive examination on the various subjects to which the work relates. Whenever the list of eligible candidates runs out, or in the judgment of the Board additional help is needed in the Department, a notice is published in the City Record, the official municipal organ, to the effect that a competitive examination will be held at the appointed time, to fill the vacancy or office advertised. Candidates for examination are then expected to make regular application through the Director of Civil Service, from whom blanks may be obtained for the purpose, and upon which are to be stated personal history, qualifications, etc., of the applicant, vouched for by at least three well-known citizens of New York, one or more of whom should be physicians in good standing. The examinations are strictly competitive, that is to say, only those who gain the required percentage of marks and pass at the head of the lists are eligible for appointment in the order of their proficiency. At one time, I believe, the Board of Health as the appointing power reserved the right to select from a certain number of those who on examination stood highest on the lists the ones whom they considered most fitted to fill the office; but I am unable to say whether this is still done. So far as I know, exception to the rule is now made only in favor of veterans of the army or navy, who, when otherwise eligible, have the preference of appointment.

The salaries paid to medical health officers, not including the chiefs of divisions, vary in amount from $1,800 to $900 per annum, the average being about $1,200 a year. The medical school inspectors receive $30 a month during the school term, and the summer corps of inspectors are paid $100 a month for two or three months at midsummer. Regularly on the first day of the month, and as long as the duties required are properly and punctually performed, every official of the Health Department receives a check for the amount of salary due, upon signature of his or her name on the pay-roll.

With regard to the character of the work required of medical health officers, it undoubtedly necessitates expert knowledge, which, in this country at least, cannot be acquired outside of the service of one of our large municipal health department systems. But with ordinary exercise of energy and assiduity in its daily performance, it is not difficult to gain the requisite knowledge in such a well organized system as that of the New York City Department of Health.

The time which each medical officer is expected to give to the work varies, of course, with its character and the orders of his chief of division; but every one must report for duty daily except Sundays and holidays, and there is a vacation of two weeks in the year. Certain officers, like the diagnosticians and bacteriologists, are assigned for special duty, alternately, on Sundays and holidays; and two diagnosticians are on duty in the main offices of the Department day and night. No absences are allowed without special permis-

sion of the Board through the chiefs of divisions, and in case of sickness a report must be sent at once to headquarters, a doctor's certificate being furnished later.

Inasmuch as the remuneration received for the work of the medical health officer is inadequate to secure the services of the highest class of physicians and expect them to devote all their time and labor to the Department, these officers are granted the privilege of carrying on a private practice in the city, or engaging in other professional occupation, in so far as this does not interfere with their duties as health department officials. There are, moreover, certain other compensatory advantages to be gained in connection with special kinds of work, and more particularly that of bacteriology, which affords a fruitful field for experience and investigation to those who are employed as bacteriologists and pathologists in the Health Department.

Until bacteriology shed the light of its discoveries on the origin and nature of infectious diseases, public hygiene or preventive medicine was but an incomplete science, and sanitary authorities were often compelled to blunder aimlessly in the dark. It was a new and important departure, therefore, from the old methods of Health Department work which was instituted in New York City (1892) at the suggestion and under the direction of Dr. Hermann M. Biggs, pathologist and director of the Bacteriological Laboratories, and for which he deserves the highest possible credit, namely, the establishment of a Bacteriological Laboratory as part of the Municipal Health Department system, this being the first laboratory of the kind ever established anywhere under municipal control. It was originally designed to afford facilities for the bacteriological diagnosis of Asiatic cholera, then threatening to invade the city, and for the investigation of questions relating to disinfection and disinfectants. A very short time, however, after the opening of the laboratory, the scope of the work was extended and facilities for the free bacteriological diagnosis of diphtheria were offered to the physicians of New York. The work in diphtheria was soon followed by the perfecting of arrangements for the free bacteriological examination of sputum for the diagnosis of cases of suspected tuberculosis among residents of the city. Then in 1894 investigations in connection with the production of diphtheria antitoxin were begun, and the municipal authorities having made a special annual appropriation (antitoxin fund) for the prosecution of this work, the Health Department undertook the manufacture of antitoxin in its own laboratories. The use of this product was commenced in 1895.

A portion of the diphtheria antitoxin was freely supplied to all public institutions in the city; antitoxin was also furnished free to physicians for use among persons too poor to pay for the remedy; and antitoxin was administered free on the request of the attending physician to any resident of New York City by a specially detailed staff of medical inspectors. The surplus antitoxin remaining after the public was supplied in this way was then sold, as authorized by a special act of legislature, "the proceeds to be devoted to the manufacture of diphtheria antitoxin and other antitoxins." The special fund thus accumulated made possible the establishment and maintenance of a "Hospital and Research Laboratory," devoted to the production, not only of diphtheria antitoxin, but of other bacteriological products, and to general experimental investigations in relation to the infectious diseases.

The work of this laboratory now includes the production of tetanus antitoxin, antistreptococcus serum, mallein and tuberculin (used by the Department in the diagnosis of glanders and tuberculosis, respectively, in animals), and numerous experimental researches regarding diphtheria, pneumonia, typhoid fever, tuberculosis, influenza, smallpox, etc. The administration of Pasteur's treatment for the prevention of rabies is also now being given at the Hospital and Research Laboratory free of charge to residents of New York City. There is a special laboratory and stable devoted to the manufacture of bovine vaccine virus, investigations undertaken in this laboratory having resulted in the production of glycerinated vaccine pulp of great activity and durability. Moreover a new laboratory is at present in course of construction for the special investigation of the bubonic plague. These laboratories are situated at the foot of East Sixteenth Street near the Willard Parker Hospital.

The routine bacteriological work is carried on in the "Diagnosis Laboratory" in the main office building of the Health Department (969 Sixth Avenue); and this work also includes, besides the examination of cultures and of sputum, respectively, in cases of suspected diphtheria and tuberculosis, the examination of blood and serum by the Widal test in cases of suspected typhoid fever. These routine examinations for diagnosis now amount to very many thousands in number in the course of the year. They serve the double purpose of assisting physicians in the city to arrive at positive conclusions in their clinical diagnoses, and of determining the action of the public health authorities with regard to the quarantine and disinfection of certain diseases.

Furthermore, it may be said, that the conspicuous reduction in the mortality of such wide-spread and fatal scourges as diphtheria and tuberculosis (the former of which has been reduced to about one-half of what it previously was) in New York City, has been largely due to the work done in the Bacteriological Laboratories.

It will be seen, from the foregoing description of the organization and work of the New

York City Department of Health, that the municipal health department system, as here exemplified, offers a wide and profitable field for cultivation, not only in all matters pertaining to public health, but more especially in certain lines of expert knowledge and scientific investigation. This system, however, of which New York may rightly be regarded as the pioneer and model, is not confined to this city; on the contrary, it now finds its analogues in many other cities of this and other countries, although there are perhaps few, if any, bacteriological laboratories anywhere so thoroughly equipped for Health Department work as those of New York City.

But so far we have spoken only of the possible advantages to be gained in the service of the Municipal Health Department system. Are there no disadvantages connected with it? Yes, there are, both in the position itself of medical health officer, and in the difficulty of getting the appointment; and to some these drawbacks and difficulties may appear to render the attempt to obtain or occupy a place as medical health officer as prohibitory, if not suicidal.

In the first place a medical officer of health is liable to become, although not necessarily so, and unpopular personage, to prevent which it may require on his part the exhibition of great tact and discrimination, not to speak of equanimity, in the discharge of his duties. This does not refer so much to the public in general, who at the worst may regard him perhaps as one degree removed above a police officer, as to his colleagues in the profession, some of whom will look upon him possibly as a usurper and dictator in medical matters, about which he cannot, in their opinion, know as much as they do, as experienced practitioners. This fact, together with the time he is expected to give to the Department, although he has several hours a day to devote to his own affairs may tend to detract from rather than to add to, his chances of success in private practice. Nor, for the same reason, does his connection with the Health Department bring him any positive advancement in the social scale of life. Then, too, as a matter of course, no man who is a public servant can expect to be his own master entirely, especially if he hold only a subordinate position. He is under orders of his superior officer and must conform to certain rules of discipline, being required not only to perform his routine work properly and punctually, but to be ready at a moment's notice and on any emergency by day or night, to drop all private business, however urgent or important, to obey duty's call whenever or wherever that may be.

Moreover, despite these apparent disadvantages, the position of health officer is not at all easy to obtain. For having a fixed salary attached to it—a rarity in medicine, even it if be only a paltry $100 a month—there are many who covet it. For every vacancy or additional place to be filled there are often a hundred or more applicants; and few of these vacancies and places occur. No one under the Civil Service rules can be discharged except for neglect of duty, hence dismissals are rare. This is not only because those in office are very circumspect in their work and conduct, not to give cause for dismissal, but also because the character of the work is such that it necessitates the retention in office as long as possible of men who have been specially trained for its performance. And it is manifest that no body ever resigns voluntarily a paid position unless he has something better in view, or at least the insurance of a similar income in the receipt of which he will enjoy greater independence and superior advantages.

But for all that, the situation is not quite as black as it is here painted. Nor do I wish, in concluding my paper on the health department system, to leave behind a pessimistic impression of its work and influence. Far from it; for although I do not desire to pose as special pleader or spokesman for any health department in particular, I am a staunch supporter and advocate of the system in general. The minor disadvantages connected with the position will depend to a large extent upon one's own personal character and behavior, and they are, in my judgment, more than counter-balanced by the possible advantages to be gained as medical health officer. The obstacles in the way of appointment are undoubtedly great, but not insuperable, as is evident from the fact that these positions have been, and are being, constantly secured by others.

Finally, with regard to the work itself, I believe that there is nothing which a young medical graduate can undertake at the present time that will give him a broader field of vision in his profession especially at the beginning of his career, or more opportunity to do "the greatest good to the greatest number," while certainly benefiting himself, than the study of sanitary science and preventive medicine under the modern municipal health department system.

THE ADVANTAGES IN EXAMINING FOR LIFE INSURANCE.

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At the request of the Editor, I wish to set forth some of the advantages which accrue to the active practitioner when he becomes a medical examiner for life insurance. I can only speak in this connection for a legal-reserve, level-premium company, for my experience has been confined exclusively to that field. I know nothing of the practical workings of industrial and assessment insurance.

What I have to say must, therefore, be considered entirely foreign to those forms of insurance and applicable only to those companies which are sometimes called "old line companies." These all require about the same standard in their examiners and most of them pay the same fees, so that observations suitable for one are generally appropriate to all.

The standard set by the companies is a high one and the fee paid is large enough to warrant the best of workmanship. A medical examiner must be not only a good physical diagnostician, but also a man of tact and discretion. Above all he must have a firm backbone and a resolute aversion to being cajoled even by the most plausible agent. It is not always a easy matter to avoid this but it is a prime requisite. He must also be careful and precise in recording the answers to the various questions. To study the examination in black and white is quite a different matter from examining the applicant in flesh and blood. A small omission in an answer may entail considerable correspondence and much delay, which may prove fatal to the agent's hopes. The examiner must be prompt in keeping his appointments. It is true these cases are not matters of life and death, but they mean bread and butter to the agent. It is not right to disappoint him, as he may have worked long and hard on a case. Failure to keep appointments is the most common cause of dissatisfaction on the part of an agent. He generally rectifies it after a few mishaps by ceasing to use that examiner, and then the examiner feels that he has a grievance.

It may be observed that these remarks so far apply to the qualifications of the examiner and not to the rewards which he is supposed to get. That is true, but we also show that the best man deserves the prize. The successful general practitioner is the one who possesses the qualities needed to make a successful life insurance examiner. He is the one that the company wants. Especially in his earlier years he will find the rewards of great advantage. Long before his practice has grown so large that he is known to everybody, he will find that his interest in life insurance work begins to diminish, for the encroachments of clinical practice will begin to hamper him. When he finds that he can no longer give the time and attention which it deserves, let him say so to the company. Do not let him be a dog in the manger, who cannot do the work himself and begrudges anybody else having a share in it. He can often make it his privilege to pick out his successor, thereby still retaining some influence. His position, though shorn of some prizes, will preserve its connection with the company and the latter is very glad to avail itself of his advice and counsel, when he can give it.

The rewards due a medical examiner for a life insurance company can be divided under several heads.

1. Let us consider the pecuniary aspects, as this naturally occurs first to most people. The fee that nearly all first-class companies pay for each examination is $5.00. This includes the answering of a number of questions, a thorough physical examination of the applicant and a chemical examination of the urine. It does not include a microscopical examination of the urine, as this is required only under special conditions and then an extra fee is paid for it. The same fee is paid whether the case is accepted or declined, so that no premium is put upon the wishes of an agent to have a case passed.

This is good pay for the work required, as good as any doctor gets except a few high-priced consulting specialists in the large cities. I do not know of any place where the regular fee for the first visit is over $5.00, and this visit should include the careful anamnesis, a thorough physical examination, a chemical examination at least of the urine, and a scheme of therapeutic procedure which contains a prescription or two, an outline of dietary and many other details. There is usually also a more or less guarded prognosis and some talk, perhaps discussion, with other members of the family. All this service is rendered in the great majority of cases for a fee no larger than $2.00 or $3.00, and the average doctor as he rides away wonders whether he will be able to collect a cent, and when. Now, with a life insurance company his collections are 100 per cent. good, payable each month, and the work certainly is easier and takes less time. Occasionally the company requires him to see the applicant again, but that is due in most cases to the examiner's own carelessness in not fully or properly answering the questions which are plainly set forth in the examination blank. Outside of these mishaps, which are his own fault, the occasions on which a company calls for additional work within the prescribed fee are comparatively rare. It seems to me that the pecuniary reward alone should make every young practitioner eager to qualify as examiner to as many life insurance companies as he can.

2. From a professional standpoint, a medical examiner for a first-class insurance company may be considered as one who is endorsed and approved by competent authorities after careful investigation. A life insurance company takes great pains and goes to much expense to pick out the best men they can find in a place. It sifts the wheat from the chaff, and when it asks a physician to be a medical examiner it signifies thereby that he ranks among the first of his associates. The public understand this and value the recognition which a doctor thereby obtains. The profession appreciate it, too, although the unfortunate who does not

obtain these prizes may affect to sneer at them. But notice how eagerly he seizes any opportunity to prefer his claim for such a position. See how the experienced agent works on his gullibility by assuring him of an examinership if he will only take out a $10,000 policy, the premium on which he will easily be able to pay out of his fees, according to the plausible agent. This story is old and frequent, but to the pain of the profession be it said, it is perennially fresh to some credulous ones. In a well-regulated company it is a most certain way of not having one's desires gratified.

3. From a scientific point of view examining for life insurance also has its advantage. It enlarges one's sphere of observation and opens up a phase of human nature which has never been presented to him before. He has to rely to a much greater extent upon physical diagnosis, for in this new field he will find that patients minimize their symptoms. The most conscientious applicant will insensibly gloss over his previous mishaps, and a less scrupulous one will force the skill of the examiner to the utmost. How often do we find under careful cross-questioning that the simple chancroid cured in a few weeks develops into a typical case of syphilis; how a little blood-stained mucus grows into an ordinary pulmonary hemoptysis. This is not the pleasant side of human nature, but unfortunately it is very common, and a physician is all the better equipped for having seen some of it. It makes him more self-reliant, gives a greater dignity to his physical examinations, and teaches him the self-respect due his own keen observation.

4. It is also a social advantage outside of the recognition which it obtains for him in the profession. The public appreciates the position which he holds and respects the confidence shown in him by the company. He meets life insurance agents of all degrees and shade and acquires a great deal of tact in treating their requests and desires, many of which he is unable to comply with. An agent works hard to interest an applicant, he is human, and he discounts the future as thoroughly as the average man. When he gets an application signed he feels that the commission is in his pocket, and not infrequently he spends it. Naturally a rejection is a great disappointment and he is very apt to take it hard. A medical examiner learns to handle him with such tact under these circumstances that no friction is developed and at least an outward appearance of satisfaction is maintained. This experience is of use to the examiner in all his work, as it is no light accomplishment to convert a disgruntled man into a complaisant one without changing one's own views. It also develops a moral backbone, a very wholesome thing to have in all walks of life.

These are some of the advantages of examining for life insurance and they are appreciated by the best men in the profession. For instance, Dr. Henry M. Lyman, Dean of the Rush Medical School and Professor of Practice in the same, has been for years our chief medical examiner in Chicago. It is only during the past year that his health has prevented him from doing the major part of the work as heretofore. In New Orleans Dr. John B. Elliott, Sr., Professor of Practice in the Medical Department of Tulane University, holds the same position. I could mention many others of equal rank in the profession who are examiners for life insurance.

Of course there are some difficulties. The work is exacting and requires careful, conscientious attention, and therefore a lazy or careless man will find it hard. It also calls for a high grade of medical knowledge and, therefore, the ignorant or badly-educated man will find it impossible. It demands the strictest integrity and therefore the corruptible man will find no place for himself. But to the honest, bright, up-to-date practitioner examining for life insurance offers great inducements. He may even become so absorbed in this class of work that he seriously neglects his other professional duties and is tempted to give them up entirely that he may have more time to devote to this specialty. This is a great mistake and must be carefully guarded against. A good examiner must keep himself constantly informed of the progress of medical science and he should be constantly in touch with the practice of his profession. A physician should never give up his practice simply in order to make examinations for life insurance.

THE OUTLOOK FOR THE YOUNG PHYSICIAN IN STATE HOSPITAL AND SANITARIUM WORK.

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IT is assumed that every young physician on receiving the degree which admits him to the dignity of the doctorate in medicine is desirous of qualifying himself to meet the highest demands of professional life through the attainment of a thorough training and experience in a general hospital, which training and experience are nowadays regarded as essential to the completion of a preliminary medical education, even though a hospital course is not obligatory. In other words, a medical degree while it confers the legal right to practise medicine does not in itself afford a man professional standing nor imply the moral right to practise which a proper training alone can give.

Probably the most important question which confronts the recent graduate in medicine, as he

is about to enter upon the threshold of his professional career is how to start in practice. In common with other medical teachers, I have frequently been asked by the student or young physician, as to what branch or department of medicine I would advise him to take up. To this I have usually replied: "Take up that branch for which you find you have an aptitude and liking after you have had sufficient experience in general medicine to enable you to form an intelligent judgment in respect to the question." The young physician is prone to feel that certain departments of medicine are distasteful to him, or at least not to his liking, and to think that by ignoring these and devoting his energies to the particular branch in which he feels most interest he will more speedily become proficient in that. This process of reasoning is too often misleading and, if acted upon, will almost certainly result disastrously. The constantly widening scope of medical science renders it difficult, if not impossible, for one man to become skilled in every department thereof, hence the tendency to a division of professional labor into specialties which has come to pass. The true specialist, however, is not a "hot house" growth, so to speak, but, instead, is a natural outgrowth in the broad field of general medicine in which he had become well grounded before developing the qualities of an expert through the discovery of a special aptitude or taste which has led him by a process of evolution, as it were, into the particular field of practice in which he finally acquires an especial reputation. The specialist whose superstructure of knowledge rests upon a broad and deep foundation of varied experience in general medicine is not likely to dwarf the measure of his professional capacity by the habit of overestimating the importance of his specialty and thus lose sight of other influences which may have an important bearing upon the disease for which his special knowledge and skill are sought. On the contrary, his experience in general medicine has rendered him sufficiently familiar with the phenomena of disease to enable him to exercise a sound judgment in the practice of his specialty.

This brings me to the subject of which I desire to speak, in compliance with a request of the Editor of the MEDICAL NEWS, namely, "What are the chances of the young physician in State hospital and sanitarium work; that is, in institutions for the insane, whether public or private?"

First, as to the State hospitals, it may be said that the medical service in State hospitals for the insane, especially in the State of New York, offers to the young physician a most inviting field for the clinical study of mental disease as well as in the matter of pecuniary compensation and allowances, which, in comparison with the pay and allowances of medical officers in other eleemosynary institutions, are on a very liberal scale. Then, too, a position on the medical staff of a State hospital is one of honor, dignity and responsibility, as well as a credential to the best society in the community in which the hospital is situated, if the incumbent chooses to make it so. The medical service in the New York State hospitals for the insane is graded as regards rank and pay respectively as follows: medical superintendents, $3,500 to $4,500 per annum, and maintenance for self and family; first assistant physicians, $2,000 to $2,500 per annum, and maintenance for self and family; second assistant physicians, $1,500 to $2,000 per annum and maintenance for self; assistant physicians, $1,200 to $1,500 per annum and maintenance; junior assistant physicians, $900 to $1,200 per annum and maintenance. The number of physicians inclusive of superintendents and medical internes is about 130. The number of medical officers allowed for each hospital is as follows: one medical superintendent, who is appointed by the managers and who is the chief executive officer of the hospital and has the general superintendence of the entire hospital plant, together with its furniture, fixtures and stock and the direction and control of all persons therein; one first assistant physician, who is the superintendent's deputy and who acts in the capacity of superintendent in case of absence or illness of the latter; a second assistant physician, who usually has charge of a department of the hospital or of a group of buildings, where there are detached buildings; assistant physicians, usually one in charge of each department, assisted by a junior physician. The number of assistant and junior physicians in each hospital is determined by the State Commission in Lunacy in accordance with the number of patients, the ratio being one staff physician to about two hundred patients. Each State hospital is also required by law to have one woman physician on its staff, at an annual salary of $1,000 to $1,500 and maintenance, but who is not in the line of promotion. All medical officers receive an increase of salary from the minimum to the maximum of their respective grades at the rate of $100 for each year of continuous service. Superintendents are appointed by the Board of Managers and all other medical officers by the superintendent. Appointments are made only from certified lists furnished by the State Civil Service Commission before whom the candidate must have passed a competitive civil service examination. Certain qualifications are requisite in order to become eligible for this examination, namely, for the position of superintendent candidates must be well-educated physicians, graduates of an incorporated medical college and have had at least five years actual experience in an institution for the insane; candidates for first assistant must possess qualifications like those prescribed for superintendents except that the period of experience in an institution for the insane is reduced to three years. Physicians below the grade of superintendent and first assistant, other than women physicians, must enter the service as

juniors. Candidates for examination for the position of junior must be legally qualified practitioners of medicine.

Under existing regulations promotions of assistant physicians to the grade of second assistant, also of juniors to the grade of assistant physician, may be made upon the ground of fitness and merit irrespective of length of service and without further civil service examination. This regulation is designed to furnish an incentive to officers in these grades to merit promotion. Application blanks and information as to time and place of holding examinations for positions of assistant physician and junior physicians may be obtained from the Secretary of the State Civil Service Commission, Albany, N. Y. The names of successful candidates are placed on the "eligible list," in the office of the Commission, from which selections are made whenever vacancies occur. In view of the fact that these examinations are usually a bugbear to young physicians it should be said that the questions—about twenty in all—relate only to medicine, surgery, obstetrics, physiology, etc., and are of such a nature that any recent graduate should be able to answer them readily. The examinations are in writing and candidates are allowed five hours in which to complete them.

In addition to the regular medical staff each hospital is allowed two medical internes or clinical assistants who receive an annual salary of $600 and maintenance. These positions are open to recent graduates in medicine and serve as a stepping-stone to staff appointments, especially to civil service "eligibles" while awaiting a vacancy on the regular staff. Internes are appointed by the superintendents, after a formal civil service examination held at the hospital by a local examining board. The medical service of the New York State hospitals is practically free from partisan influences, the tenure of office being secure during good behavior and efficient service. Each officer is allowed an annual vacation with full pay during absence. Thus it will be seen that the attainment of a superintendency is open to every medical officer in the service who proves himself efficient and worthy. It is safe to say that among the present superintendents of the New York State hospitals—17 in all—there is not one who did not reach his position within a period of ten years from the time he entered the service. Here, as in other fields of labor, promotion invariably comes without seeking to him who proves his fitness therefor by a faithful, efficient and zealous performance of the duties which fall to his lot. In fact, it is merely a question of the survival of the fittest, a race in which the drones and laggards are left behind.

In addition to salaries, the allowances which the State makes to medical officers of hospitals for the insane are most liberal. The living apartments of superintendents and their families—in some instances separate houses being provided— are in all cases ample and in some even palatial in point of construction and arrangement, as well as luxuriously furnished. Servants, cooks, waitresses, chambermaids, coachmen, etc., are supplied by the State; also horses and carriages, unlimited laundry facilities, and, in fact, everything that is essential to a gentleman's well ordered home. In addition to these, superintendents have the free use of telegraph, telephone, stationery, stenographers, etc., also liberal table supplies and, incidentally, the use of the products of the farm, garden, green houses, etc. It is estimated that these allowances, exclusive of salary, are equivalent in value to $10,000 or $12,000 per annum. The hospitals are also liberally supplied by the State with standard medical books and journals, instruments of precision and in fact everything in the way of medical and surgical appliances, laboratory facilities and equipments, etc., that belong to a well organized modern hospital for the insane. Add to these the wealth of clinical and pathological material with which the hospitals abound and it at once becomes apparent that the statement which I made at the outset, that "the medical service in State hospitals for the insane offers to the young physician a most inviting field," is not an exaggerated one. Moreover, the opportunity of making a reputation as an alienist that will insure success in the private and forensic practice of mental medicine is open to every medical officer who chooses to avail himself of it. To this end "the good assistant physician" will cultivate a true scientific spirit and professional zeal by a careful and systematic study of the numerous interesting cases in his service, writing them up from time to time for presentation to medical societies and to medical journals. These are the way in which medical men make legitimate and lasting reputations. The bane of State hospital life and one which the far-sighted and ambitious staff physician will studiously avoid, is a tendency to routinism and perfunctory performance of duty. The men who yield to this tendency, and I regret to say that many do, rarely attain to a superintendency or to high repute as specialists.

Respecting the chances of the young physician in private institutions or so-called sanitariums for the insane, the subject may be disposed of in few words. There are two classes of private establishments for the insane, namely, incorporated private asylums, or hospitals, and small sanitaria that are conducted on the so-called "family plan." The former are comparatively large, quasi public institutions under the control of boards of managers or governors and are organized and equipped much like the State hospital, having a medical superintendent and staff of assistant physicians. The latter are appointed by the superintendent and are not subject to civil service requirements. These institutions receive only private or "pay" patients, and, while the clini-

cal advantages to be had therein are nearly if not quite as great as those in the State hospitals, the pay and allowances are generally less, as also are the chances of promotion; nevertheless, the medical service in this class of institutions offers many attractions to the young physician in the way of clinical advantages and comfortable surroundings.

It need hardly be said that owing to the comparatively small numbers and the class—wealthy—of patients treated therein, the small private sanitaria for the insane afford only meager opportunity for the clinical study of mental diseases and practically none at all for pathologic investigation. All of the legitimate institutions of this class in the State of New York are licensed by the State Commission in Lunacy and are subject to visitation by that body. The medical head of the institution who usually is also the proprietor or owner, is designated officially by the Commission "Physician in Charge," and he must have had five years actual experience in the care and treatment of the insane in order to obtain a license. Assistant physicians are appointed by the physician in charge, subject only to formal approval by the Commission as to good character and the legal right to practise medicine. The rate of compensation is determined by mutual agreement between employer and employed. Most of the proprietors of strictly private institutions for the insane throughout the country are men who have acquired a practical knowledge of the treatment and care of the insane in public institutions for that class, a fact which suggests another inducement for young physicians to become proficient in "ministering to a mind diseased."

The number of physicians engaged in private asylum work in the State of New York is about 40.

In conclusion, there are a large number of hospitals and institutions for the insane throughout the United States in which numerous physicians find useful, profitable and congenial professional occupation.

85 Madison Avenue.

THE MEDICAL MAN IN THE UNITED STATES MARINE-HOSPITAL SERVICE.

NOT every man who passes brilliant examinations, nor every keen, eager worker in a medical school is sure of success in the practice of medicine. So many elements enter into the qualifications of a physician who works up a large practice that the medical education is but the foundation of success, and not the means to it. Sufficient capital to furnish and equip an office, sufficient means to move in good society until the practice comes; good breeding, tact and some social accomplishment to make one attractive as a man; without some one of these, the man of brains finds it difficult to bridge over these years between the time when he first signs his name as a physician, and the day when he has made it known.

It is therefore a sign of wisdom when the graduate pauses to ask himself whether the mental qualities that brought him honors in his medical course are supplemented by those social and material attributes that will bring him a good practice. If he be a man of parts, and more keenly interested in his work than in the business side of it, he may find the best expression of his powers in the Marine-Hospital Service. The Treasury Department of the United States Government offers to the ablest youths of the country an assured income and excellent social position, and what is practically an appointment for life to those that are best qualified to fill the positions.

It is by no means the desire to paint the life of the Marine-Hospital Service in alluring colors in order to induce young men to enter the examinations, as this is entirely unnecessary, for the classes at present are as large as can well be handled, and the tendency is towards increasing members, but as the time for passing the examinations is limited to the ages from twenty-one to thirty, it is well for those who think of entering this branch of the profession to take their examinations as soon after their graduation and hospital service as is possible, for the qualifying examinations are very severe and exhaustive. It is not that the actual book knowledge required is any more than that required by any first-class college, but the knowledge in every branch must be extremely thorough and practical, so much so that unless a man takes a special course of training for a few months it is difficult for him to attain the 80 per cent. that places him on the eligible list.

The positions, however, are well worth the effort of special preparation, for these detailed and comprehensive examinations. They insure good incomes which increase every five years irrespective of promotion. If a medical officer incurs a permanent disability he is retired on a comfortable pension.

The assured position is apt to tempt men who feel that the world owes them a living to consider the Service as something to fall back upon; but it is by no means an asylum for the not-over-energetic nor a pensioned shelter for the broken-down; it is a very exacting and comprehensive service on which the health of the country at large depends. The physical examination, in the first place, throws out all but men of robust physique, for as they must live in any part of the country that the Government chooses to place them, they must be able to stand any climate and also great strain of work in times of emergency. The preliminary requisites of education are high, and the moral tone of the candidates is carefully considered; so that in order to compete at all for the position a man must be above the average, and even after he has passed his examinations satisfactorily he is merely eligible for appointment, and if no appointment comes to

him within a year he must be re-examined. The examining board hold for themselves the privilege at any time to decline to continue a man's examinations, if for any reason they feel sure that he would not make a suitable candidate, and no amount of influence, or wire-pulling or politics can get a man into one of these life positions if his own personal merits do not commend him to the examiners.

The general information regarding the examinations may be briefly summed up as follows: Examinations are usually held once a year, in the spring, sometimes more frequently. The boards meet either in Washington or New York. All applicants must be graduates of reputable medical colleges. They are given, first, a physical examination, including a test of color vision. Absolute health is a prerequisite to appointment. Each applicant then writes a personal history of himself, giving his educational advantages, etc. A written examination is then conducted in the chief branches of medicine, including anatomy, physiology, chemistry, materia medica and therapeutics, practice of medicine, practice of surgery, obstetrics and diseases of women, hygiene, pathology and bacteriology. This is followed by a brief clinical examination in a hospital. Added to this is an oral examination in common school branches, also the collateral sciences and literature, sufficient to demonstrate the scope of each applicant's preliminary education. Each applicant reaching the grade of 80 is eligible for one year and appointments are made to vacancies as they occur in the relative order of merit.

In addition to the Surgeon-General, the corps consists of three grades, namely, Surgeons, Passed Assistant Surgeons and Assistant Surgeons. A successful applicant is appointed to the grade of Assistant Surgeon and is usually first assigned to one of the large Marine Hospitals in order to become familiar with the routine work of the Service. His salary is $1,600 per annum. After five years' service as an Assistant Surgeon, the officer is eligible for examination for promotion to the grade of Passed Assistant Surgeon, with a salary of $2,000. Appointments to the grade of Surgeon are made in the order of seniority from the list of Passed Assistant Surgeons, as vacancies occur in the list of Surgeons. The salary of a Surgeon is $2,500.

United States Marine Hospitals are located on all the navigable waters of the United States. The chief stations on the Atlantic Coast are as follows: Portland, Me.; Boston and Vineyard Haven, Mass.; New York, N. Y.,; Philadelphia, Pa.; Baltimore, Md.; Norfolk, Va.; Wilmington, N. C.; Charleston, S. C.; and Savannah, Ga. Those on the Gulf Coast are at Key West, Fla.; Mobile, Ala.; New Orleans, La.; and Galveston, Tex. On the Pacific Coast, stations are located at Port Townsend, Wash.; Portland, Ore.; and San Francisco, and San Diego, Cal. On the Great Lakes, the chief ports are Detroit, Mich.; Chicago, Ill.! Cleveland, O.; and Buffalo, N. Y. On the Ohio and Mississippi Rivers, officers are stationed as follows: Pittsburg, Pa.; Cincinnati, O.; Louisville, Ky.; Evansville, Ind.; Cairo, Ill.; St. Louis, Mo.; and Memphis, Tenn.

In addition to the Marine Hospitals, there are twelve national quarantine stations controlled by the Marine-Hospital Service, which are located at various seaports on the Atlantic, Pacific and Gulf coasts of the United States.

The hospitals are furnished with good medical libraries and are also supplied with a number of medical journals. Each hospital is equipped with a working clinical laboratory, also photographic and other scientific apparatus.

The Service conducts in Washington one of the best-equipped laboratories in the world, and a bill is now in Congress providing for a separate building for same. It is the policy of the Service to detail young officers in small classes for a term of service in this laboratory with a view to equipping them as scientific clinicians and practical bacteriologists. Several officers who have shown special aptitude in this line of work have been educated by the Service in the best laboratories of Europe. Encouragement is given to those who desire to pursue surgery or special lines of investigation and officers are urged to join medical societies and mingle with members of the profession in order to increase their own knowledge and promote the efficiency of the Service. They are permitted to publish professional reports based upon their own observations in hospitals of the Service. The Service treats something over fifty thousand patients a year.

One duty of the medical officers is to examine arriving alien immigrants and, at times when epidemic disease threatens to invade the United States from Europe, officers are detailed to serve in the chief European seaports for the purpose of inspecting emigrants before embarkation. Occasionally an officer or a commission of officers is detailed to proceed to foreign ports for the purpose of making investigations along particular lines.

With the annexation of the new possessions and dependencies of the United States, the Marine-Hospital service has extended to such territory and officers are now stationed in Cuba, Porto Rico, Hawaii and the Philippines.

In times of epidemic disease in the United States when such disease threatens to invade one State or Territory from another State or Territory, the Marine-Hospital Service takes control and institutes measures for the suppression of the same.

Thus the particular abilities of the different officers of the Service are at the command of the country's particular needs, so that the energetic man with a power of organization or the expert bacteriologist, or the accomplished diplomat all have a chance to rise to prominent positions in the medical profession.

Monument to Dr. Skene.—A movement is on foot to erect a monument to Dr. Alexander Skene of Brooklyn.

MEDICAL PROGRESS.

Suprarenal for the Pain of Carcinoma.—When morphine, orthroform, nepthene, cocaine, and many other local and general analgesics fail to give relief from pain in advanced or recurrent carcinoma, E. A. PETERS (*Lancet*, Mch. 2, 1901) cites cases in which suprarenal extract has proved invaluable. He uses a 10-per-cent. solution and applies it locally two or three times in twenty-four hours. One patient with malignant esophageal stricture, after weeks of pain found immediate relief from sipping one teaspoonful of the 10-per-cent. extract. It would seem to be most valuable in this class of cases.

Fetal Periods of Stress.—The neuron of the human being passes through stages corresponding to those found in the adult fish, frog, bird, and mammal. In fish and batrachia the cerebral hemispheres do not cover the region of the third ventricle from which the eyes arise; the same in the human embryo of seven weeks. In reptiles and birds the hemispheres cover this, but leave exposed the region of the optic lobes, as in the human of the middle of the third month. In mammals the hemispheres cover cerebellum, medulla and olfactory lobes as in the human embryo at fifth month. In some mammals even of high order (*e. g.*, Hapalidæ) the hemispheres are smooth as in fifth month of human embryo. At any time fetal stress may cause arrest of development of the neurons. The power of passing through the fetal period of stress will depend on the condition of the fetus at the time. J. G. KIERNAN (*Medicine*, Apr., 1901) considers the most important of these periods to be the senile or simian (about four and one-half months) and that of sex differentiation. Arrest of development at the senile period may cause precocity and premature senility. If caused by syphilis there is the after-birth interference with the child's development. As to sex differentiation, long after impregnation nutrition is still influential, and even after the sexual organs have developed, poor maternal nutrition may arrest female development and cause reversion to the male type. At any time in life development may be arrested so that persons remain youthful. Such females are sexually anesthetic prostitutes, prurient prudes, hysteric reformers or gossip-mongers. Males may have the female instincts of modesty toward men and a liking for female occupations.

"Ureine" Non Est.—W. S. HAINES and C. S. WOODS (*Medicine*, Apr., 1901) have made extensive experiments in a search for the "ureine" described by Moor. They conclude that there is no such substance and that Moor's "ureine" is simply a strong aqueous solution of well-known urinary solids and of chemicals used in operating on the urine.

Atmospheric Ozone and Bacteria.—Some interesting experimental conclusions as to the bactericidal power of what they call "dry ozone" are detailed (*Lancet*, March 2, 1901) by RANSOME and FOULERTON. They tend to upset the time-honored view of the ozone of the pine forest. They are as follows: (1) Ozone in the dry state and under the conditions in which it occurs in Nature has no appreciable action on the vitality of pathogenic bacteria; (2) moist ozone is a very efficient bactericidal agent; (3) this suggests an interesting relation between dry ozone and water-free chlorine or sulphur dioxide; (4) so far as is now known any purifying action which ozone may have in Nature's economy is due to its oxidation of organic matter rather than to any direct bactericidal power. It interferes with bacterial growth only by the destruction of available food supply.

Temporary Uterine Fixation.—H. ROSE (*Centralbl. f. Gynäk.*, 1901, No. 12) calls attention to an operative procedure calculated to prevent retro-uterine adhesions in such conditions as extra-uterine gestation. He calls it temporary ventro- or vaginofixation, because the supporting suture is absorbed before any permanent adhesions are formed and thus the normally free mobility of the organ is resumed. In ventrofixation he passes an ordinary heavy catgut suture through one horn of the uterus at the origin of the round ligament and ties the same in the usual manner in the abdominal parieties. Thus the uterus is hung up obliquely out of the pelvic cavity away from the peritoneum ripe for adhesions. Only a single point is in contact with the parietal peritoneum and any adhesions which may form at it are not enough to support the womb after the catgut is absorbed. In the vaginal fixation in colpoceliotomy anterior the catgut armed with two needles is passed through one or both round ligaments at their roots *extraperitoneally* and emerge through the vaginal substance, one on either side of the wound, while the bladder is strongly drawn upward by an assistant. The peritoneum is now sutured and the vaginal wound closed in the usual style. Then this supporting suture is drawn out until the uterus comes up out of the Douglas cul-de-sac and then tied. Its office is performed by the time the gut is absorbed.

Enteroptosis.—In a résumé upon this subject M. EINHORN (*Med. Rec.*, Apr. 13, 1901) follows the nomenclature of Glénard who applies the term to a prolapse of one or more abdominal viscera. The corset is undoubtedly a very important factor in the causation of these abnormalities. It is said that the total pressure of the corset varies between thirty and eighty pounds. The liver suffers from direct pressure, the other abdominal organs are pressed downward and the pelvic floor bulges by tight lacing about one-third of an inch. Constitutional weakness is also considered a predisposing cause. Enteroptosis is accompanied in most cases with movable kidney and occurs in about 33 per cent. of females having digestive troubles, and in about 6 per cent. of males having the same disturbances. No symp-

toms may be present. Usually, however, there is a faint feeling or weakness after arising. Sensation of fatigue with pronounced backache after walking is common in women, and a dragging sensation in epigastrium is frequent. Flatulence, and constipation are usually present and frequent micturition is found in a large number of cases. Physical examination shows usually a lax abdomen, organs easily palpated, and a depression in epigastrium with protrusion below when the patient stands. The position of the stomach can be demonstrated by splashing sounds, by insufflation with gas or water or by the use of a gastrodiaphone. An auxillary in diagnosis is Glénard's "belt test," in which the physician stands behind the patient encircling the abdomen with the hands and thus supporting the lower portion. Relief of distress speaks in favor of enteroptosis. The prognosis is good, but complete cures are naturally very rare. The principal part of the treatment of these cases consists in the application of a well-fitting abdominal supporter, ample nutrition and exercise. The bandage should be provided with windows over the iliac crests, also with straps at the thighs which prevent slipping up. Rose recommended the use of adhesive plaster over the lower part of abdomen. Overfeeding, if possible, outdoor exercise and intragastric electricity are especially indicated.

Intestinal Obstruction.—W. J. Walsham (*Brit. Med. Jour.*, March 23, 1901) in discussing intestinal obstruction calls especial attention to a cause usually overlooked by most authors. It is the reduction of an old hernia, usually by the patient, occasionally by the physician, *en masse*, that is, sac with contents and all complete through the canal of exit into the body cavity. If the hernia is already strangulated, of course, the process goes on to the surprise and discouragement of the attending doctor. If the hernia be simply incarcerated strangulation will sooner or later appear, depending upon the usual accidental circumstances. The history going with this condition is a very painful, rather forcible, at first slow, then very sudden reduction, beginning and continuing with the pain and ending with "a pop," but usually without cessation of the symptoms of strangulation. As a rule just within the ring of the canal a tumor can be palpated and percussed which represents the hernial mass. The treatment consists of laparotomy and whatever management its findings indicate.

Intussusception.—C. P. Clubbe (*Brit. Med. Jour.*, March 23, 1901) says that the diagnosis of this fatal and rather common condition in childhood must be made at the earliest possible moment and only can be reached by studious examination of the patient and careful history of the course of the disease has run. The treatment must be initiated without any delay. The first step must always be an enema, no matter at what stage of the condition the patient is first seen. Often an enema carefully given will reduce the invagination at least in part and convert one situated in the pelvis on the left, perhaps in the rectum itself, to one situated at the ileocecal juncture, where the trouble really began. Thus the operation itself will be much easier and briefer. For such an injection anesthesia to the surgical degree must be given always, to secure absolute relaxation of the patient, freedom from any pain, all possible decrease in the shock, and the possibility of observing the degree of the reduction. Should the injection fail to produce any improvement or total reduction a laparotomy must be at once undertaken. When the site of difficulty is reached, the invagination must be reduced by gentle squeezing on the *intussuscipiens*, never by traction on the *intussusceptum*. If success follows the effort the bowel must be examined because if dead a resection must be done at once. Such resection is the only rational treatment when other means fail. When the appendix has been involved in the invagination, on general principles it should be removed because its highly vulnerable organization makes it liable to necrosis although the rest of the bowel may recover.

Jacksonian Epilepsy, with Craniotomy and Implantation of Eggshell Membrane.—W. J. Greer (*Bristol. Med. Chir. Jour.*, March, 1901) reports in detail the case of a young woman, who eleven years ago sustained a fracture of the skull, was ill for two years, and suffered from epileptic seizures of a localized character. These fits had been absent for nine years, but had reappeared and were becoming more severe and more frequent. An operation was performed and a considerable quantity of hard, dense tissue and some softened brain matter were removed. To prevent adhesions between the brain and its coverings and the scalp a square inch of eggshell membrane was inserted between the brain and the skull opening and another piece placed outside over the opening and then the scalp was sutured over all. About four months after the operation following a slight injury the old cicatrix broke down and left a small opening in the scalp through which the second piece of eggshell membrane could be seen, white and glistening. This piece of membrane was removed in its entirety. Its structure had undergone no changes, and under it could be seen granulation tissue. The writer thinks that it was a mistake to insert this second and outer piece of eggshell membrane as it was unnecessary. The cixatrix is good, supple, freely movable and not in the least tender. The patient has had no seizures since the operation.

Changes in Bone Marrow with Leucocytosis.—In discussing the pathological alterations as found in bone marrow as a result of artificially-induced leucocytosis, H. Rubinstein (*Zeitschrft. f. klin. Med.*, Vol. 42, No. 324) concludes as follows: (1) Leucocytosis is an exclusive function of the bone-marrow; (2) after the emigration of the already formed polynuclear leucocytes there is found in the marrow an increased production of large, homogeneous, mononuclear cells which soon show granules and develop into myelocytes;

(3) with a much prolonged leucocytosis, these myelocytes may be stored up in the marrow in such numbers that they form one-half of all the cells; (4) the granular cells develop directly from the large, mononuclear and the granules are basophile in the early stages. This process goes on only in the marrow and never in the blood; (5) the large mononuclear elements develop from small, lymphoid cells which are peculiar to the marrow and distinct from the cells of the lypmh-nodes; (6) the eosinophile cells are formed in a similar manner.

Acute Pericarditis.—According to G. CARRIÈRE (*Le Nord Médical*, Apr. 1, 1901) the prognosis depends on (1) its cause; rheumatic pericarditis is fairly benign; that of scorbutus, Bright's disease, pyemia, or tuberculosis is very grave; (2) its nature; dry is not serious, serofibrinous more so, but not necessarily fatal; hemorrhagic is fatal indicating cancer, tuberculosis, or Bright's disease; purulent is usually fatal; (3) the extent of the inflammation; (4) the condition when attacked; it is very grave in old people, in the puerperal state, in alcoholics, the debilitated, the sick or the cachectic; (5) the general effect of the attack; if the prostration is great and the fever high the prognosis is serious; (6) the state of the myocardium; it is well to remember that when life is saved there may be adhesions which subsequently will give symptoms. The main point in diagnosis is the differentiation of the murmur from an endocardial, hemic, or extracardiac murmur. The pericardial murmur is usually superficial, harsh and grating, not transmitted, loudest in the third left space, and mid-systolic or mid-diastolic or both. It is increased by the sitting posture or on pressure with the stethoscope and may be accompanied by friction fremitus. The endocardial murmur is deeper, soft, blowing, transmitted and heard loudest according to the orifice affected, is systolic or diastolic and not changed materially by sitting up or pressure of stethoscope. The hemic murmur resembles the endocardial, but is transmitted only along the vessels, is heard most often and most loudly at base, and is systolic. The extracardiac sound is superficial, soft, mellow, not transmitted, mid-systolic or mid-diastolic, and heard mostly at apex or over left ventricle, seldom in third left space. It is modified by respiratory movements and change of position.

THERAPEUTIC HINTS.

Tuberculous Glands.—To avoid unsightly scars, G. B. MASSEY (*Pro. Phila. Co. Med Soc.*, Mch., 1901) makes a small opening into the gland with a narrow bistoury under ethyl chloride spray, and inserts a sliver of amalgamated zinc to act as the anode of a galvanic current of 1 to 3 milliamperes. This is turned on gradually and maintained for a few minutes till the tract is cauterized and sufficiently impregnated with the oxychlorides of zinc and mercury to keep it patulous for a few days. A gold electrode with amalgamated tip insulated up to ¼ inch from the point is then inserted and 2 to 10 milliamperes turned on for ten minutes and then the wound dressed. Through the sinus thus formed the dead bacilli and deposited chemicals can drain. The treatment is repeated about every three days till the gland has shrivelled.

Pericarditis.—If of rheumatic origin, writes G. CARRIÈRE, institute energetic salicylic treatment; if from other infection give quinine as a routine. Keep patient in bed on milk diet. Apply dry or wet cups to the pericardium, or leeches or sinapisms; bleeding, tincture of iodine or vesicatories are harmful. Keep the heart up by digitalis, sparteine, or caffeine. Digitalis should be preferred when the cardiac excitement is extreme, or there is hypotension, or arythmia. The author uses Nativell's crystallized digitalin in dose of ½ to 1 milligram (gr. $^1/_{120}$-$^1/_{65}$). In no disease should the action of digitalis be more closely watched. Never give caffeine toward night, as it increases the nervous excitement and insomnia, but in the daytime it may be given with good result as follows:

℞ Caffeine .....0.50-1.0 (gr. viij-xv)
Syrupi ..... 50. (℥ss)
Sod. benzoat..... 2.0 (℈i-℥v)
Aquæ ..... 100. (℥iij-℥ij)
M. Sig: Gm. 8.0-15.0 (℥ii-iv) at dose.

Sulphate of sparteine is less dangerous than either of the above in dose of gm. 0.01-0.05 (gr. $^1/_6$-$^5/_6$), one to three times a day. The pain and dyspnea may be controlled by injections of morphine. If effusion takes place apply a blister followed by an aseptic poultice. Stimulate diuresis by theobromine, gm. 0.50 (gr. viij), given four times the first day, six the second day, and eight the third, then decrease the frequency. Trional is safe for insomnia. Paracentesis is indicated if the effusion causes pressure symptoms (cough, dysphagia, vomiting, edema, neuralgia), if the pulse is small, irregular, if there is a tendency to syncope or cyanosis, if there is skodaic resonance at the back of the chest, if there is edema of the chest wall, or if the fever is intermittent or continues elevated and the complexion is leaden. Advanced tuberculosis is the only contraindication. Plunge the trocar straight in at a spot 5 cm. (2 in.) to the left of the sternum in the intercostal space just above the lower limit of dulness. Evacuate the fluid slowly, and if purulent wash out with an antiseptic solution, then withdraw the cannula quickly. Pericardiotomy is still in its experimental stage and so far has not given better results. Great prudence is necessary during convalescence; a good tonic would be:

℞ Fl. ext. kola } aa...c.cm 5.0 (♏lxxv)
Fl. ext. coca, }
Ac. citric,..... gm. 1.0 (gr. xv)
Sod. arsenat .....0.05 (gr. $^5/_6$)
Sig. C.cm. 2.0 (℥ss) each day.

Absorption will be favored by potassium iodide.—*Le Nord Médical*, April 1, 1901.

The Medical News.

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OF MEDICAL SCIENCE.

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THE GRADUATE IN MEDICINE.

The precepts of the old to the young are apt to be uttered either in a spirit of egoism or bitterness. The man who advises another to follow in his own footsteps, with "Never do thus," and "Always do so," implies that his success is a standard, while the man who attributes his failures to some unlucky accident, or unfortunate prejudice against him, or to the injustice of his fellows, has usually a beam in his own eye.

But the temptation to advise is too strong to resist. We who have but recently passed that way remember the slough of despond and see where we took the wrong turning, and it is with the idea of pointing out the safe, sure roads across the field of medicine that we have asked some of the leading men in the profession to prepare the articles of this issue for the students who are graduating in all the medical schools of the country.

The young man fresh from his course where hard work has brought him honors, and where the loafers meet their well-merited reward, suddenly realizes that it is one thing to turn the light of his intellect on and off, at the demand of examiners, and have its quality duly rated in decimal points, and quite another thing to let it so shine before men that they may see his good works.

If he has perception he realizes suddenly what it takes a conceited man a long time to learn, *viz.*, that life is a great game, and that one's education is only acquiring the rules. After graduation the game begins, and all men start practically free and equal. The three-tenths of a point that make the difference between the first-prize man and the second-prize man, or the two points less that meant no prize at all, are as insignificant as the race of the tendrils up a bean-pole. The test is in the beans. Therefore it is well for the successful to nip any propensity to pride, and for the slow to pick up courage, for the success of all is no longer to be measured by calculating professors, but by an unthinking, undiscriminating, but on the whole a very critical public that "knows beans" when it sees them.

The man who is going to succeed is he who adapts himself to conditions as they are instead of going around explaining how they ought to be. If he has a home, a social circle, a certain amount of influence in a far city or country place, he will, if he has good sense, return to it, bringing the results of his medical education to his own people. He may fear that he will always be "Tommy Jones" to them and that they will never let him mend their bones. He does not realize that the very men who pat him condescendingly do so to hide a certain aching regret and envy of the fresh vigor of well-trained youth, and that at his first strike of success his childhood friends will be the most proud of him, and, if he has taken pains to pay his respects graciously on his return, will herald his name abroad.

The man who begins to practise medicine in the city must descend from the dizzy heights of honor he may have attained in his classes, must forget that he is the nephew of the celebrated Dr. Bolus, and on the level plain of present opportunities must take up his line of march. His uncle will perhaps ask him to sit up nights with a wealthy patient, and permit him to give ether at his operations; but he will not risk his own reputation, nor ruin the youngster's chances by recommending him until he has proved himself. And to do this he must not only do minor surgery and write out prescriptions passably well at the clinic, but he must do it very well, as well as if for a millionaire patient, so well, in fact, that his technic, his manner, his interest in the case

will be jeered at, as being a little better than the occasion demands. The present generation, as in the days of Piers Ploughman, has those who "do wel, do bet, and do best"; and it is those who do best who eventually get the reward from the profession if they have any connection at all.

But the modest, average good fellow who has no hopes of distinguishing himself by brilliant work need not despair, for a very good practice may be worked up by a very average man if he be a gentleman. To be a gentleman according to Roycroft philosophy is a fine art. A man who is gentle, generous and kind will disarm criticism and prejudice through the potency of a gracious presence. But books on etiquette will not serve the end, nor studious attempts to smile at the proper time. The words of Hubbard, the sage, are gold to the family doctor, "Your heart must go out to all men, the high, the low, the rich, the poor, the learned, the unlearned, the good, the bad, the wise, the foolish—you must be one with them all, else you can never comprehend them. Sympathy! It is the touchstone to every secret. But knowledge must go with sympathy else the emotions will become maudlin. Knowledge in use is wisdom. Get knowledge by coming close to Nature, listening to her heart-beats, and let your heart go out to humanity by a desire to serve."

Apart from the question of character and environment comes the practical issue that is uppermost in nearly every student's mind, How is he to make his living during the first three years? It is jarring to the pride of a young professional man to realize that he is twenty-five years of age and has barely earned enough to buy his own neckties. But the discomfort is still greater when he finds that, although thoroughly equipped, he cannot find enough paying work to pay his board and office rent, and is obliged to depend on his father for several years more.

It is from this economic point of view that the current issue of the MEDICAL NEWS has been prepared. Every man who has contributed a paper on one of the different ways and means of obtaining a livelihood in medicine writes from the experience that has made him an authority on the subject. It is with no sense of egoistic superiority that each lays down certain principles of action, but with the frank desire to cooperate with us in giving a greeting to the young men who are about to join the profession and to bid them take courage.

The conflicting stories afloat in the profession cause undue hope and depression in the student's mind. The rumor that young Dr. Goldbrick made $7,000 in practice during his first year, by setting up a coach and Japanese servant and doing the swell; the reported confession that the now famous surgeon, Dr. Sawyer, only collected $25 in his first year, and the misleading statistics that the average income from physicians' practice all over the United States is about $900 a year, all have nothing to do with the question of each individual student's success.

We state emphatically that there is a living for every hard-working, well-trained youth who leaves any reputable medical school in the country. It may not be the kind of living that collects a $190,000 fee from a single patient, but it surely will not be a threadbare and down-at-the-heel income.

One thing we beg the young men of the profession to note in all the articles we present, that the men who know believe that honest, efficient work, good sense, and a modest bearing ensure success.

POSSIBLE CONTAGIOUSNESS OF DIABETES.

THE most interesting points brought out in the recent investigations of diabetes concern the occurrence of the disease in families. It is easy to suggest heredity and dismiss the facts from the mind as if that suggestion afforded any rational grounds of explanation. Every one of the chronic contagious diseases has at some time in its history been considered hereditary. At the present time there are few biologists who pretend to believe in the direct heredity of any acquired characteristics, pathological or physiological. Moreover, in the case of diabetes the question of the origin of family diabetes is still further involved by the occurrence of marital diabetes. The number of cases that have been reported in which both husband and wife, although of different stock, have suffered from diabetes is entirely too great to think them due to coincidence. As a rule, just as with tuberculosis, the communication of disease seems to be from the husband to the wife. He suffers first and the lowered resistive vitality incident on home-keeping and worry makes the wife a victim.

Conjugal diabetes was at first explained on the score of conjugal syphilis. Syphilis, like heredity, is however an easy word to inject into a discussion on etiology. Especially of

late years when it is claimed by ardent syphilographers that the disease may run an absolutely latent course, it is a simple matter to have recourse to it as an explanation of obscure causation in disease, but this adds absolutely nothing to our knowledge of the subject. With regard to conjugal diabetes, in a number of recorded cases there was absolutely no sign or clinical history of syphilis and no postmortem evidence of the disease's previous existence.

Recent clinical observations point more and more to the conclusion that diabetes may, in some cases, be of infectious origin. Transient glycosuria occurs in many of the infectious diseases. It has been noted, in slight amount at least, in over one-half the cases of whooping-cough. After pneumonia it has been found in some 12 per cent. of cases examined and the presence of sugar in the urine could be detected as long as three months after convalescence had been established. Like albumin in the urine, sugar would seem to occur during the course of many severe infections. The acute diabetes of young children bears all the stigmata of an acute infection.

Despite all the study that has been devoted to the pathology of diabetes there remains a certain number of cases in which no basis of organic change to account for the disease can be found. There is undoubtedly a pancreatic diabetes. There is perhaps a hepatic diabetes. Beyond these cases lie the nervous and so-called hereditary cases for which some explanation is asked.

It has been suggested that the disease is due to the presence of a ferment in the blood which converts the normally latent sugar of the liver and blood into glucose. In this form it cannot be used within the body, but is excreted as a waste product. What the nature of this ferment may be is not known. Supposing its existence, it is easy to see why diabetes attacks husband and wife and often carries off several members of the same family. The possibility of its conveyance by contact is sufficient to cause physicians to warn those in intimate contact with diabetic patients of the necessity for careful precautions as to special cleanliness before food and drink is taken. Of course, this will seem to most physicians absolutely unwarranted. They will scoff at the idea of the contagiousness of diabetes and will talk of the cruelty of making life harder for unfortunate patients by giving publicity to such an idea. It must not be forgotten that a short quarter of a century ago just these same things would have been said about the contagiousness of tuberculosis had anybody even suspected enough about the real nature of the disease to suggest family prophylaxis.

TEMPERANCE PHYSIOLOGY IN THE PUBLIC SCHOOLS.

We are glad to note the signs of revulsion against the extreme temperance reformers, who have by the trick of their laws forced so much namby-pamby stuff into the schools under the head of physiology.

Bugaboo morals are the most childish and the soonest outgrown; and the small men and women who devour with large-eyed horror these exaggerated sentiments about fatty livers and ulcerated stomachs, delirium tremens and cancer of the throat following the use of alcohol or tobacco, quickly learn to discover even the truth in these statements.

We know only too well the means by which very excellent physiologies have been padded to make up the requisite percentage of words upon alcohol and tobacco, under a narrow-minded censorship that struck out every statement concerning the use of alcohol as a useful adjunct in disease; and we have marveled to see the results of scientific investigations deliberately perverted into false generalities.

We deplore the absolute ignorance of American teachers as well as children, concerning the fundamental laws of health, and we wish most heartily that temperance in the matter of eating, of tea- and coffee-drinking, and common sense concerning fresh air, exercise and sleep, as well as the economic value of foodstuffs, might be particularly taught in schools; but so unfair has been this temperance movement, and so great have been the exaggerations perpetrated on an unwary public, that we fear the influence that the schools should have on all matters of public health, including the dangerous effects of intoxicating drinks and tobacco, will be greatly diminished.

Already Western educators are opposing the teaching in its present form, and the Massachusetts Legislature is tightening the reins. Other States are realizing that they are not only being made ridiculous by their laws, but are seriously handicapped by sentimentality; therefore

we hope that the day will soon come when the children will not be forced to swallow pure alcohol for practical physiology.

SAN FRANCISCO'S PLAGUE.

THE complete official report of the Commission, consisting of Drs. Simon Flexner, F. G. Novy and Lewellys F. Barker, appointed by the Secretary of the Treasury for an independent investigation of the plague in San Francisco is just to hand in the report of the Marine-Hospital Service.

It confirms the statements already made in the MEDICAL NEWS and serves to accentuate what was pointed out last November in our columns, that there was culpable negligence on the part of some of the health authorities of California in steadfastly closing their eyes to the fact that the plague existed in the Chinese quarter. Now that the true facts are made public in all their significant the thanks of the community are due to the Secretary of the Treasury for the wisdom shown in selecting so able a committee of investigation.

ECHOES AND NEWS.

NEW YORK.

New French Hospital.—The plans for the new French Hospital on Thirty-fourth street, west of the hospital's present site, are now completed and building operations are reported soon to be begun.

Appointment at St. Mary's Hospital.—Dr. J. R. Kevin has just been appointed attending surgeon to St. Mary's Hospital, Brooklyn.

Syracuse Health Board Stops "Rummage Sales."—A halt has been called upon the rummage sale. The Health Board has declared that it is a danger and menace to the community because of its liability to spread disease. For a year women's societies and the churches have reveled in rummage sales, the average being three a day in Syracuse.

Academy of Medicine.—At the stated meeting of the New York Academy of Medicine, to be held at Hosack Hall, May 2, 1901, under the auspices of the Section on Surgery, the general topic will be "The Clinical Aspects of Acute Intestinal Obstruction." Dr. Howard Lilienthal will read the paper and there will be a discussion on special divisions of the subject by Drs. B. Farquhar Curtis, George E. Brewer, Charles L. Gibson, Morris Manges, Henry Koplik and others.

Diphtheria Epidemic in Highbridge.—To prevent the spread of diphtheria, which is epidemic in Highbridge, Public School No. 91, the only school in the place, was closed last week by order of the Health Department.

Tuberculosis Hospital Commission.—The Committee on Rules of the Assembly April 18th amended Senator Davis's bill for the construction of a State Hospital for Consumptives in the Adirondacks so as to provide that the Commission to review the selection of the site shall consist of the Governor, the Speaker *pro tem* of the senate, and Speaker Nixon of the Assembly.

Consumptives' Hospital Trustee.—Governor Odell has named Norman S. Dyke, of Brooklyn, as a member of the Board of Trustees of the State Consumptive Hospital, in place of Walter Jennings.

Course in Bacteriology for Physicians.—The Department of Bacteriology of the New York University and Bellevue Hospital Medical College desires to announce that a short practical course on bacteriology will be given in the Carnegie Laboratory during April and May. The course will begin on Monday, April 29th. There will be given on alternate days a series of three-hour exercises on laboratory technic and the practical application of bacteriology in the prevention, diagnosis and treatment of disease. Physicians who have had some training in bacteriology and who do not desire to spend the time required for the whole course may select one or more of the exercises devoted to the consideration of special subjects. They may thus refresh their knowledge on those subjects of special interest to them and at least learn what assistance bacteriological examinations may afford in clinical work, the methods for the preparation of material for laboratory examinations, and the interpretation of results. The exercises will begin at two o'clock and will continue until five. The first six exercises will be devoted to bacteriological technic and must be taken together. The subjects for the last eight exercises and the dates for each are as follows:

May 13, 1901—The diphtheria bacillus and diphtheria antitoxin.

May 15, 1901—The tubercle bacillus and tuberculin.

May 17, 1901—The typhoid bacillus and the serum reactions.

May 20, 1901—The gonococcus, the pneumococcus and the streptococcus.

May 22, 1901—Examinations of water, ice and air, and their value.

May 24, 1901—Examinations of blood, urine, feces and milk.

May 27, 1901—Disinfection.

May 29, 1901—Miscellaneous.

Those desiring to take the entire course or only a portion of it are requested to notify Dr. Egbert LeFevre, Secretary of the Faculty, prior to April 25th, so that suitable arrangements for their accommodation may be made.

The charge for the fourteen lessons will be $20. The charge for single exercises will be $2 each. Microscopes, apparatus, culture media, etc., will be furnished. The courses will be under the direction of Dr. Wm. H. Park, Professor of Bacteriology and Hygiene, assisted by Dr. Robert J. Wilson, Dr. H. H. Brooks, and Dr. R. H. Bebb, Assistants in Bacteriology.

PHILADELPHIA.

New Clinical Amphitheater for the University of Pennsylvania.—A gift of $25,000 has been made to the University of Pennsylvania by Mrs. C. B. Newbold for the construction of an obstetrical amphitheater. The new building will be 50 feet square and will accommodate 150 students. It will be known as the Scott Amphitheater, in memory of Mrs. Newbold's mother.

Resignation of Dr. Risley; His Successor.—Dr. Samuel D. Risley has tendered his resignation as Professor of Ophthalmology at the Philadelphia Polyclinic and College for Graduates in Medicine. As a mark of appreciation of his services the Trustees, after accepting his resignation, created the position of Emeritus Professor of Opthalmology and made him its first incumbent. At the same time Dr. William Campbell Posey was chosen to fill the vacancy caused by the resignation of Dr. Risley. Dr. Posey is a graduate of the University of Pennsylvania and since studying abroad has held positions on the staff of the Howard, Epileptic, and Wills Eye Hospitals, and the Home for Incurables.

A Large Fee.—Probably the largest physician's fee ever asked in this State is the bill presented by Dr. Walter C. Browning, of this city, for his services to the late Senator C. L. Magee of Pittsburg. The bill is for $190,000 and is for professional services rendered during a period of twenty-one months. There is included $17,000 for a trip to Atlantic City with the patient and also $12,000 for similar attendance at Hot Springs, Va. Local papers quote Dr. Browning as saying that Mr. Magee voluntarily doubled his night charges of $40 per hour and told him to charge $80. The charges for the trips mentioned are computed at that rate. The executors of the Magee estate claim that the charge is exorbitant and that no monthly bills have been found among the effects of the deceased. The bill will in all probability be contested.

The Corset for Movable Kidney.—Dr. A. Ernest Gallant of New York read a paper on the above subject at the Section on Gynecology of the College of Physicians April 18th. Dr. Gallant claims that from 90 to 95 per cent. of symptomatic movable kidney can be symptomatically relieved by the proper use of a corset. He states that movable kidney is quite a common condition. To determine its frequency, examination for it was made in 1,900 gynecological cases seen in dispensary work and private practice, with the result of finding 41 cases of movable kidney. Of these, 25 had both kidneys movable. The amount of suffering does not depend on the degree of mobility, those cases in which the kidney is at the pelvic brim as a rule giving the patient the least trouble. Dr. Gallant believes that fixation of the movable kidney often does not accomplish all that is desired, while mistakes in diagnosis make the surgeon hesitate at times to operate. Belts and pads have their disadvantages and as women persist in wearing corsets it is better to teach them to wear the corset properly than to try to induce them to give up the habit.

The Technic of Applying the Corset.—The corset for holding a movable kidney in place should be as long in front as can be worn and two inches smaller than the size usually worn. It should be laced from the bottom upward and while this is being done the abdominal wall should be drawn upward as much as possible thus making the corset act as a support when tightened. Before the upper end is fastened the kidney should be pushed well up beneath the ribs. The corset should be put on before the patient rises each day and should not interfere with walking or expansion as this method prevents tight lacing at the waist. When there is tenderness of the organ the patient should be put in bed a few days, given a light diet, massaged, etc., before the corset is applied. Careful attention to the general health of the patient is needed in all these cases.

An Interesting Case of Trichinosis.—This case was exhibited by Dr. J. Chalmers Da Costa at the Neurological Society April 22d. The patient is a male, twenty years of age. There is a history or traumatism on the calf of the right leg by a bicycle pedal in August, 1900. After that the patient changed his residence and ate pork about four times a week, but not raw pork, and at times raw beef. Since January 1, 1901, the right gastrocnemius has been swelling and causing pain at night. The thigh is also now involved, the swelling being marked. Examination of a bit of excised muscle shows the presence of very numerous trichinæ. Several blood examinations have been made, the largest number of eosinophiles being 4 per cent. The leucocytes have increased from 12,000 to 20,000. The case is notable for the entire absence of the symptoms usually belonging to trichinosis.

CHICAGO.

Appointment of Dr. Peterson.—Dr. Reuben Peterson, President of the Chicago Gynecological Society, has been appointed Professor of Obstetrics and Gynecology in the University of Michigan, at Ann Arbor, to succeed Dr. J. N. Martin.

Transfer of Rush Medical College Students.—Hereafter the students of this college will do their first two years' work at the University of Chicago. President Harper has just received a gift of a large sum of money with which to provide the additional facilities needed to accommodate the three hundred students who will be transferred in a body by the new arrangement. The amount of the gift is known to be between $50,000 and $100,000. The name of the donor is withheld. The new arrangement will go into effect on July 1st and will add about three hundred names to the undergraduate roll of the University. The present Freshmen class at Rush will become part of the Sophomore class at the University, and first-year students who matriculate for the medical course will enter the University at once. Several members of the Rush Faculty also will be transferred, and additional teachers will be added to the staff of the University. The Junior and Senior medical classes will continue to do clinical work at the present location, adjacent to the Presbyterian and Cook County Hospitals, and quarters will be provided for them in the building now being erected at Harrison and Wood streets at a cost of $110,000.

Smallpox.—There have 175 cases of smallpox found in this city between November 30, 1900, and April 13, 1901, the period of the present epidemic. Of this number 143 had never been vaccinated. Of the remaining 32 cases, 30 were adults showing faint, poor or irregular scars, claimed to be evidence of attempted vaccination in infancy or early childhood, the most recent being twenty-three years old. Only two out of the 175 cases exhibited typical scars of successful vaccination. Of these 1 was thirty-five years old, vaccinated when a child, revaccinated attempted three years ago without results, vaccine lymph probably inert. The other was forty years old, also successfully vaccinated in childhood, but never revaccinated. These are the only two cases out of the total 175 on whom vaccination was ever successfully attempted, and the most recent of these was more than thirty years ago. This shows conclusively that successful vaccination in childhood and successful revaccination after are the only sure safeguards against smallpox.

Drainage Canal.—Contention of members of the Drainage Board that a reduction of the flow of water in the drainage canal in accordance with the orders of the War Department would threaten local sanitary conditions, were exploded recently by Commissioner-of-Health Reynolds. Dr. Reynolds declared the present dilution of sewage in the canal was beyond present practical sanitary requirements, as only a relatively small portion of the city's sewage was being disposed of through the canal. He added that the reduction of the flow from 300,000 to 200,000 cubic feet a minute would give no occasion for immediate fears as to Chicago's sanitary condition. Charges were made, too, by a number of drainage trustees that the reduced flow problem has been used as a club by those members of the Board who have fought for the passage of bills now pending before the Legislature by which an extra tax was sought by the sanitary district for the work of widening the river. As a result, the bill calling for an additional tax of one-half of one per cent. to carry out this plan is expected to fail of passage.

Investigation of Cook County Hospital.—Complaints and charges have been made that patients are subjected to abuses and unnecessary pain at the clinics at the Cook County Hospital. An investigating committee of thirteen has been appointed and is now listening to evidence for and against the conduct of the institution. Many of the charges are without foundation. We shall await with interest the final report of the investigating committee.

Some Forms of Meddlesome Obstetrical Practice.—At a meeting of the Chicago Medical Society, held April 17th, Dr. J. Clarence Webster read this paper in which he confined himself to three topics, namely, misuse and abuse of antiseptic douches, digital examination, and forceps. Too strong a protest cannot be urged against the indiscriminate and unscientific use of antiseptic vaginal douches in obstetric practice. There has been much difference of opinion among workers as to the normal condition of the vaginal contents, but the causes of their differences have been recently fairly-well elucidated, and at the present time it may be accepted as proven that the genital canal tends to be maintained in a state of asepticity by natural means. Prophylactic douching in pregnancy is unnecessary; neither is it necessary after labor, if the woman is not exposed to contamination by those who attend her during parturition. Given a sterile genital canal, the aim should always be to conduct the labor aseptically. Nothing is more to be deprecated than the routine vaginal examination of parturient women in practice. It is absolutely unnecessary in the great majority of cases. The abdominal examination is ordinarily a sufficient source of information to the physician. There are occasions when vaginal examination is necessary. Then it should be made with as much care as is exercised in the best technic of surgical operations, not in the hasty and careless manner only too frequent in ordinary practice. As regards after-douching, in the majority of cases it is not necessary. Where there is a tendency to the accumulation of blood-clots in the vagina, simple salt solution may be used.

There can be little doubt that since the introduction of anesthesia into obstetrical practice artificial delivery by various procedures

has become very much more frequent than in the pre-anesthetic days, when interference was avoided as much as possible because of the increased sufferings of the patient. It is too often forgotten that the majority of labors are natural, that they should be interfered with as little as possible, and that interference even by the most skilled hands is always accompanied with risks. Forceps operations are undoubtedly undertaken with too great frequency. The writer gave statistics regarding the frequency with which forceps are used in various European hosipitals.

Gynecological and Obstetrical Significance of Girlhood.—Dr. Henry P. Newman read this paper. He said that the girl as the product of modern civilization is, in everything but bodily vigor, removed by all that is desirable from her aboriginal mother. It is the just aim of our educational system to develop still further her intellectual advantages, but it is also due to her and to the vital interests she represents that we restore to her as far as is possible to modern society the physical advantages of which our multiplication of artificial standards has deprived her. Her muscular activities are curtailed by the adoption of the corset and a more mature and burdensome form of dress; her social instincts are aroused by too early participation in exciting amusements and with it all she begins to experience the nerve-trying influence of the menstrual epoch. If employed as a wage-earner, the conditions of her occupation are even less favorable as a rule. In a very large per cent. of American girls there is greater or less impairment of the menstrual function. Some of the results of improper hygiene of the developmental period of puberty are menstrual pain and nervous exacerbations, chronic congestion, inflammations, extension of the tubes and ovaries, invalidism, difficult labor, trauma in childbirth, sterility. Of most value in the premises is prophylaxis; it is much easier to prevent such evils than to remedy their effects. Mothers and educators, with the intelligent cooperation of the girl herself, can do much to better the conditions. Outdoor life should be as rigidly insisted on for the girl as for the boy. The dress should be as free and unconfined as his. Forced mental development at the expense of the physical should be discouraged. Where the local mischief has already been done the indications are to relieve pain and restore as far as possible the normal relations of the pelvic organs.

GENERAL.

New Boston Hospital.—Provisions for a new hospital for Boston are made in the will of the late George L. Thorndike of East Boston. He directs that after the death of the last legatee under the will, and when the estate exceeds $200,000, it be used to build a hospital. He also gives the city $10,000 in trust, the income of which is to be used to purchase coal for distribution among the widowed women of East Boston.

Doctors' Strike Fails.—The physicians employed by the sanitary authorities at Leipsic, who recently went on strike in a body for better conditions of employment, have been supplanted by other physicians, in need of employment, from Berlin and other cities.

St. Paul Meeting and Yellowstone Park.—Arrangements have been completed for an excursion of the members of the American Medical Association to Yellowstone Park. The Committee of Arrangements has finally succeeded in persuading the officials to open up the park a week earlier than usual in order to accommodate the Association. A special train will be run from St. Paul to the Yellowstone Park and the railroad officials have promised to do everything in their power to make it satisfactory to all concerned. The rates will be very low, but how low cannot at this time be definitely stated. Those who attended the meeting in 1882 will remember with much pleasure a similar excursion that was run at the time, and these will not need to be informed that the one now proposed will be full of enjoyment. Further announcements will be made later. The Yellowstone National Park contains more natural wonders than are to be found anywhere else in the world, and this will be a rare opportunity for our Eastern friends to see what this portion of our Great West possesses. Address editor of Medical News for further information.

Discovery That Means Food.—The *New York Sun* says editorially: "We learn from a competent authority that one of the latest developments in electrothermis is the synthesis of oxides of nitrogen from atmospheric air. The importance of such a discovery to the world at large cannot Crookes, when President of the British Aswell be overestimated. It will be remembered that some years ago Sir William sociation, called attention to the rapid diminution of the world's supply of nitrates and pointed out their enormous importance as fertilizers in increasing the productivity of the soil. Sir William Crookes maintained, and his conclusions have been to a considerable extent accepted by scientific people, that the areas of the earth that could be devoted to wheat culture were rapidly decreasing, and that unless some means could be discovered of making them produce more wheat than they do now, the growing population of the world would within a comparatively short period cause the consumption of this great foodstuff far to exceed the supply of it. Nitrogen, of course, is the base of all fertilizers, and while there are not in existence natural beds of nitrate deposits in anything like sufficient quantity to supply fertilizing material for the purpose indicated, Sir William Crookes pointed out that if a method of "fixing" atmospheric nitrogen could be discovered it would solve the difficulty. If this method has now been found we have before us one of the

greatest boons that have ever come to the human race. Cyanide of potassium is also one of the practical achievements of this new discovery and its use in the industrial arts is of widespread importance, especially in the economic separation of gold. As for the nitric acid thus made, it is absolutedly pure, of standard specific gravity and is produced for one-eighth of the cost of the nitric acid of commerce. The new century starts out with no abatement of the marvelous speculative energy that so diminished its predecessor. And electrometallurgy is still absolutely in its infancy."

Emergency Building for Ann Arbor.—At least $370,000 is required for the new buildings for the University of Michigan and for improvements in old buildings. A year ago the Board of Regents had plans drawn for a $300,000 Science Hall, which would bring together all branches except chemistry and physics under one roof, but the Auditor-General of State, owing to the small legislative appropriation, now says that the university must have funds before warrants will be honored, as the regents cannot draw upon future appropriations. The general plan of the building will not be abandoned, but to relieve the overcrowded condition of the medical department, a building will be erected near the present one, which will accommodate the bacteriological and histological laboratories. It is to cost $100,000. Work will begin next summer.

American Gastro-Enterological Association.—The fourth annual meeting of this association will be held in Washington, D. C., Wednesday, May 1, 1901. The following program is announced: "Syphilis of the Liver," by Dr. Max Einhorn; "The German Clinics of To-Day," by Dr. J. C. Hemmeter; "Etiology of Hepatic Sclerosis," by Dr. A. L. Benedict; "Treatment of Gastric Ulcer," by Dr. D. D. Stewart; "The State of the Gastric Secretion in Chronic Rheumatism and Rheumatoid Arthritis," by Dr. Frank H. Murdoch; "Some Cases of Tetany," by Dr. Wm. Gerry Morgan; "The Report of Two Cases of Acute Dilatation of the Stomach," by Dr. Julius Friedenwald; "Experiments in Peristalsis," by Dr. Fenton B. Turck; "Some Clinical Studies in Gastric Secretion," by Dr. G. W. McCaskey; "Treatment of Atonia Gastrica and Splanchnoptosia by means of Abdominal Strapping," by Dr. R. Rose; "Hyperchlorhydria," by Dr. John A. Lichty; "Report of a Case of Cancer of the Cardiac End of the Œsophagus at a Distance of Twenty-one Inches from the Incisor Teeth in a Man Five Feet and Three Inches Tall," by Dr. C. D. Spivak, and "Spastic Ileus," by Dr. Edward Quintard.

Louisiana State Medical Society.—The last annual meeting of this Society took place last week in New Orleans, April 18th, 19th and 20th, at the Medical Department of Tulane University. The program was extensive and interesting. Among the subjects discussed were: "Treatment of Fractures of the Long Bones" by Dr. E. D. Martin; "Treatment of Cystitis" by Dr. Chas. Chassaignac; "Proprietary Medicine Prescribing" was ably discussed before the Section on Materia Medica and Therapeutics, by Dr. L. Sexton, chairman; and a paper on "Middle-Ear Complications of Childhood" was read by Dr. O. Joachim; "Lacerations of the Cervix and their Consequences," were among the subjects taken up by the various Sections.

Other papers were: "Over-action of the Heart from Administration of Hyoscin," by Dr. Parsons, of Minden, La.; "Thirty Cases of Acute Lobar-Pneumonia, with Twenty-nine Recoveries" by Dr. Edward D. Newell, St. Joseph, La.; "Otitis Media Neonatorum" by Dr. O. Joachim, New Orleans; "Affections of the Nose and Throat as Factors in Diseases of the Bronchi and Lungs" by Dr. W. Scheppegrell, New Orleans; "Uses of Strychnine" by Dr. J. M. Barrier, Delhi; "Potassium Iodide and Mercury in Syphilis of the Negro" by Dr. A. Guilbeau, Breaux Bridge; "Clinical Test of Sodium Cacodylate" by Dr. E. M. Dupaquier, New Orleans; "Alcohol and Digestion" by Dr. J. A. Storek, New Orleans; "Vital Statistics in Louisiana" by Dr. G. Farrar Patton; "Science and Pseudo-Science in Medicine" by Dr. T. S. Dabney; "Symptoms of Extra-uterine Pregnancy" by Dr. C. J. Miller; "Contagious Diseases" by Dr. C. L. Horton; "Ptomain-poisoning in Children" by Dr. L. G. Le Beuf; "Spinal Analgesia" by Drs. S. P. Delaup and F. W. Parkham; "Disinfection from a Practical Point of View" by Dr. John J. Archinard; "Malarial Polyneuritis" by Dr. C. J. Gremillion and "A Case of Abdominal Pregnancy" by Dr. A. G. Sterling.

Director of the Bureau of Bacteriology and Pathology.—Commissioner Daniel Lewis of the State Department of Health has appointed Dr. George Blumer of the Bender Laboratory of Albany Director of the Bureau of Bacteriology and Pathology, which is a new department.

Columbia Honored.—Columbia has been honored by the election of two more members of its faculty to the National Academy of Sciences. The membership is limited to one hundred. Last year of the four members elected two were Columbia men. This year the Columbia professors chosen are James McKeen Cattell, Ph.D., professor of psychology and anthropology and T. Mitchell Prudden, M.D., LL.D., professor of pathology in the College of Uhysicians and Surgeons.

Medical Jurisprudence Society.—The Society of Medical Jurisprudence held its eighteenth annual meeting and dinner at the Waldorf-Astoria last Saturday. Toasts were responded to as follows: Judge William J. Gaynor, "The Future of the Municipal Government and the Doctor and the Lawyer in It"; ex-Attorney General John W. Griggs, "The United States Supreme Court"; the Rev. Father Thomas Ducey, "The Mission of Justice and Mercy"; Tom L. Johnson, "Com-

ing Issues"; Judge Henry A. Gildersleeve, "Thoroughness in the Profession"; William M. Polk, M.D., "Lawyer and Doctor"; Charles W. Dayton, "Facts and Expert Testimony"; Martin W. Littleton, "From the Diary of a Public Prosecutor." The President, Frank Ferguson, M.D., presided.

Obituary.—Dr. Almon V. Belding, ninety-four years old, of Rochester, N. Y., died on Thursday night in that city. He was born in Phelps, N. Y., and came to Rochester in 1867.

Professor Kohlstock, the rinderpest and cholera investigator, died last Monday at Tientsin. He died from disease contracted during his investigations.

Dr. H. S. Scruggs, one of the best-known physicians of Tennessee, was assassinated April 17th, while returning from a professional call. Dr. Scruggs was a school director and had trouble with the patrons of a school on account of an order promulgated requiring parents to send written excuses to teachers when their children were absent.

Dr. Frederick J. Brockway, late of 153 West Seventy-third street and 437 West Fifty-ninth Street, New York City, died of meningitis at Brattleborough, Vt., this week. Dr. Brockway was born in South Sutton, N. H., February 24, 1860. He received the degree of Bachelor of Arts from Yale, and his medical degree from the College of Physicians and Surgeons, in which institution he was an Assistant Demonstrator of Anatomy as well as Secretary of the Faculty. He was a member of the American Museum of Natural History, the New York Academy of Medicine, New York Academy of Sciences, the Alumni Association of Roosevelt Hospital, the New England Society, and the New York Athletic Club. He was a son of John G. Brockway of Contoocook, N. H., and a nephew of H. H. Brockway, the proprietor of the Ashland House, this city. A widow and two daughters survive him.

Dr. Louis Philip Fontaine died at his residence, No. 109½ East Fortieth Street, New York City, last week, from Bright's disease, after an illness of several months. Dr. Fontaine was born in France, and came to this country forty years ago. He was sixty-nine years old. He was married, but childless.

Dr. Joseph S. Carradine, who died in East Orange Tuesday, and whose office was at 45 West Twentieth Street, came from a Mississippi family and was graduated from the Pennsylvania Medical College in 1858. He was a member of the County Medical Society and the County Medical Association, and was a brother of the Rev. Dr. Beverley Carradine, who, while pastor of a prominent Methodist Episcopal Church in New Orleans, was among the first to raise his voice in denunciation of the Louisiana Lottery and start the crusade which finally compassed the fall of that corporation.

Dr. Edward Watts Morris, an eminent physician in North Alabama, died at Birmingham Tuesday, at the Morris and Lumpton Infirmary, of pneumonia, aged thirty-six years. He was a native of Virginia, and graduated in medicine in that State, practising first in Richmond. He went to Birmingham sixteen years ago.

CORRESPONDENCE.

OUR LONDON LETTER.

[From Our Special Correspondent.]

LONDON, April 13, 1901.

THE REFORM OF THE ARMY MEDICAL SERVICE—CAUSES OF THE DOCTORS' DISCONTENT—THE ANTAGONISM OF LORD WOLSELEY, THE DUKE OF CAMBRIDGE AND SIR REDVERS BULLER—THE UNPOPULARITY OF THE SERVICE—MILITARY TITLES FOR MEDICAL OFFICERS—THE COLLAPSE IN SOUTH AFRICA—CRITICISMS ON THE ROYAL ARMY MEDICAL CORPS—A "DRASTIC REFORM" PROMISED.

ANOTHER matter now exciting keen interest in the profession here is the question of reform of the medical service of the army. For many years past those who knew the real state of things have foretold that in a war of any magnitude our medical service must inevitably break down. Again and again it has been urged on the War Office that the medical staff was undermanned and consequently overworked, and that the officers had no opportunity of keeping themselves abreast of the progress of medical science. But the War Office paid no heed to these warnings, and the state of the service went from bad to worse. The military authorities persisted in regarding the doctors as civilians whose relation to the army, as Lord Wolseley elegantly put it, was that of "camp followers." The late Commander-in-Chief lost no opportunity of showing his contempt for medical officers—a feeling all the more remarkable in him that one of his own brothers was an army doctor. At a parade in Dublin when the men of the Army Medical Staff with their officers stood before them with drawn swords in accordance with military regulations he angrily ordered that the weapons should be sheathed as "these men are not soldiers." He said in his "Soldier's Pocket-book" that medical advice is a good thing—when it is asked for; and that it might not be thrust upon him in Egypt he stationed his Principal Medical Officer as far as possible away from headquarters. Lord Wolseley in the same manual scoffs at the idea of having a special Sanitary Officer, whom he calls a "fifth wheel to the coach."

The disastrous epidemic of typhoid fever among the troops in South Africa may fairly be regarded as the practical outcome of this attitude of mind in the late Commander-in-Chief. Had there been a Sanitary Officer with Lord Roberts in his march to Pretoria, it is probable that the outbreak might have been checked at the beginning, or at any rate prevented from becoming the devastating scourge which, more than the "slim-

ness" of the Boers or the blundering of our generals, has been the cause of the prolongation of the war.

The Duke of Cambridge, who was Commander-in-Chief before Wolseley, was also unfriendly to the doctors. It is on record that His Royal Highness's life was saved in the Crimean War by an army surgeon who by a deed of the most daring courage extricated him from a mass of Russians by whom he was surrounded. The Duke's nerves were so shaken by his adventures on the field of Inkerman that he soon after got leave to attend to "urgent private affairs" in England. The incident referred to perhaps created in his mind an unpleasant association with army doctors. At any rate he always showed a special dislike of them afterward. Before a Royal Commission which inquired into the state of the service some years ago, the Duke's language with regard to them was of such a character that it was not considered advisable to publish it in the Report. Some of the evidence given by Sir Redvers (or Reverse) Buller on the same occasion was also suppressed. The Charon of the Tugela is reported to have expressed the opinion that it is right that medical officers should be systematically blackballed at military clubs, as they are unfit to be admitted to the company of the noble warriors who growl and grumble and fight their battles o'er again in those establishments.

This being the spirit which animates the War Office in its dealings with the medical officers of the army, it is scarcely to be wondered at that the service has become more and more unpopular with the younger members of the profession, till now there are practically no candidates. Such as do present themselves at the periodical examinations for admission to the Service are for the most part, to use a phrase of John Bright's, the *residuum* of the medical schools. This has been the case for a long time past. Twenty-five years ago the service was left almost entirely to men from the Irish and Scotch schools; the feeling of English students was like that of John Abernethy as to the corresponding service of the navy. When Richard Owen had finished his studies he went to take his leave of Abernethy who asked him what he was going to do. On Owen's replying that he was going to sea, Abernethy exclaimed "Going to sea! As well go to the d——l!" No one with any chance of making a livelihood in civil practice would have dreamed of entering the army. The result was that the service was recruited from a class of men who were no credit to their profession. Army doctors became a byword for ignorance. I remember one candidate who at his clinical examination was puzzled by a case of torticollis. He afterward asked one of the resident officers of the hospital what it was, and on being told said he supposed the disease was called after the great Colles of Dublin! Cases of the simplest character used to be sent to general hospitals by commanding officers of regiments, with the explanation that they were beyond the professional skill of the army doctors. All this was long before the relations between the combatant and the medical officers became embittered by the demand of the latter for military rank and titles. The pay and status of the army doctors were gradually improved by successive concessions—all wrung from the War Office by the force of circumstances—and three years ago the late Secretary of War, Lord Lansdowne (himself by the way a descendant of Sir William Petty who was Physician-General to Cromwell's army in Ireland) granted the titles which had been obstinately refused by the military authorities before. The army doctors were made officers of a Corps (Royal Army Medical Corps) with purely military titles and with command of the men of their Corps. This satisfied the doctors for a time and it was hoped that the service would attract a better class of men. The medical Colonels and Majors, however, were looked upon as counterfeits by the military officers, and many civilian practitioners did not care to see their brethren masquerading in plumes matching ill with the sober cloth of their profession.

All this must be taken into account in estimating the extent to which the army medical service has broken down in South Africa. The jealousy which the military titles have excited has added venom to the attacks which have been made on its work. It is clear enough that many of its critics are rejoiced that it has failed, and this unpatriotic and unphilanthropic sentiment is founded on a mean spite which betrays itself in many anonymous letters which have appeared in the papers as well in the dithyrambic maledictions of Mr. Burdett-Coutts. The true inwardness of this gentleman's onslaught is that he is the spokesman of a band of society ladies who went out to South Africa as ministering angels, but had their wings tied up with red tape, whereat they not unnaturally felt aggrieved. To avenge their wrongs they instigated a "campaign of calumny."

In Parliament members of the Opposition have found in the misfortunes of the Royal Army Medical Corps many weapons that could be used with effect against the Government. The political element must especially be allowed for in determining the exact significance of Sir Walter Foster's criticisms of the medical management of the war. Soon after the beginning of the campaign he patriotically offered to go out to South Africa as a Sanitary Commissioner, and he is inclined to attribute the calamities that have occurred to the refusal of his offer.

When the most liberal discount, however, has been made for these various sources of fallacy, the fact remains that the medical service of the army has broken down, and that this is not fully to be explained by undermanning or even by military titles. The system is bad, promotion being almost entirely by seniority, and initiative being everywhere paralyzed by red tape. Moreover, the standard of professional skill among the officers of the R. A. M. C. is far from what is should be.

Mr. Broderick the present Secretary of State for War was promised a "drastic reform" of the service. It is very doubtful, however, whether he will succeed, for the tone of his utterances on the subject of military titles and other points has so far been distinctly unsympathetic. He is a self-confident man and is credited with the intention of working out a scheme of reform entirely his own. But he will have to reckon both with the medical profession, which will accept no scheme detrimental to its dignity, and with the public which is determined to have a medical service adequate to the needs of its soldiers. One thing is certain, and that is that if the government wishes to get medical officers of the right sort it must pay them liberally, give them the position and authority required for the efficient discharge of their duties, and provide that they shall have abundant opportunity and ample encouragement to improve their knowledge and perfect their skill.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

CHLOROFORM-OXYGEN COMBINED ANESTHESIA—PRIMARY SYPHILITIC CEREBRAL ENDARTERTIS—CHRONIC ARTHRITIS — NEURITIS — PHRENIC HERNIA—POSTMORTEM CÆSAREAN SECTION—TYMPANIA UTERI—INHALATION DISEASES.

ARONSON explained the recent favorable results obtained by Wohlgemuth in giving combinations of oxygen and chloroform for anesthesia. At Zuntz's laboratory Aronson has himself during the past several years made use of such a combination in experiments on animals. Pushed to the fatal point, the oxygen appeared not to have the least possible influence in saving the animals. On theoretical grounds Zuntz has himself condemned its use in practice. The reason Wohlgemuth has had better success lies in the fact that he delivered the oxygen under pressure, thereby securing its better combination with the chloroform. Further experiments show that compressed air similarly combined with chloroform is just as efficacious.

HEUBNER presented the brain of a two-and-a-half-year-old child which had presented the symptoms of a cerebral paralysis and shown a recurrent right-sided muscular paresis. The lesion was a vast primary syphilitic endarteritis affecting the base of the brain particularly, and causing as a secondary phenomenon through faulty nutrition a microgyria of one hemisphere which did not have as accompaniments any marked softening or gummata. During life there was apparent a right-sided syphilitic retinitis of hereditary origin. He also presented an eleven-year-old girl who presented a general chronic arthritis of all the joints, practically, which had gone on to more or less ankylosis, even of the vertebral column and caused retarded and imperfect development of the under jaw. The etiology appeared to depend entirely upon choreic attacks in earlier life. His next patient was a child ten years old with a general neuritis and paresis of the extensors of the feet without any affection of the sensibility. Here again choreic intoxication was very probably the cause.

WIDENMANN brought before the meeting a forty-year-old man who had had since early youth a hernia through the diaphragm into the left thorax. It appeared to give him no especial symptoms except that during the past year, he had suffered from temporary signs of incarceration. Examination showed part of the left lobe of the liver, and almost all of the stomach herniated into the thorax thereby causing physical signs of pneumothorax. What the cause of the hernia had been, it was impossible to determine.

GESSNER, at the Aertzlicher Bezirksverein zu Erlangen, January 28, 1901, described an example of postmortem Cæsarian section which resulted in a living offspring. The primipara had had a large amount of albumin in the urine during her pregnancy and died during the initial eclamptic seizure, which itself had not been seen by him. Within ten minutes after death the section was done and a very deeply cyanosed child obtained. After about two hours' hard work it was fully resuscitated and left in good health. The emptied uterus contracted down a great deal and really forced the placenta up into the wound. The uterus and placenta were removed and hardened. On longitudinal section it was found that the placenta in this case did not separate centrally from the uterine wall, but though bulging forward was still firmly attached. This is contrary to the teaching of many authorities, who hold a central separation is the first step toward the discharge of the afterbirth.

The same speaker read the paper of the evening on tympania uteri. This he stated is a condition which the text-books are apt to neglect or treat lightly and too indefinitely. Its prognosis based upon the old syndromata for diagnosis and the old statistics is very poor. Naturally the condition is far more common than was once supposed and practically only the frank clear cases are those which are recorded, because others often escape diagnosis altogether. The old belief that tympania uteri depends upon the entrance of bacterium-laden air into the uterus is according to the researches of Gebhard erroneous. The underlying factor is infection by the bacterium coli. Other observers claim that anaerobic pus may also be the cause. The first step of this condition appears to be foul-smelling or putrid liquor amnii. The clinical picture is a various one. In the majority of cases the fever is a purely absorption fever, due to the entrance into the system of the products of cell activity and decomposition of the elements of the liquor amnii. Consequently it appears a variable time after the swelling of the organ and usually disappears when it is emptied and cleansed. In a minority of the cases one finds various severe recurrent febrile manifestations throughout the puerperium. Such are due to infection of the genital tract with the pyogenic micro-organisms from without, in addition to

those already present in the uterus. Supposed air-embolism of the uterus had best be ascribed to sapremia with anaerobic germs as the cause. Feeble pains may easily appear in tympania uteri, especially when the distention by gas has been at all marked. In such patients we may look for atonia uteri in the puerperium, particularly just after delivery. Bad cases of this condition are to-day much more rare, because the diagnosis is made at an earlier date and the causes are better known. Tympania is more common among primiparæ because of their aptitude to carry the child over time. A narrow pelvis contributes and an early rupture of the membrane definitely exposes the mother to it. At the present time the prospects for the mother are better than formerly, in the ration of 50 per cent. of deaths under the old statistics to about 12 per cent. in the new. Similarly the child is better off. Neither the height of the fever nor the pulse-rate permit of any conclusions as to the ultimate outcome, but a decidedly unfavorable sign is the occurrence of chills early in the onset of the disease, because in such cases severe sickness during the puerperium is likely. The treatment of tympania uteri is to be begun just as soon after delivery as possible. Formerly vigorous intra-uterine douches were in vogue, but have latterly been abandoned because they appear to induce chills, which forerun serious complications.

SAENGER, at the Medic. Gesell. zu Magdeburg, January 16, 1901, deliberated on the cause underlying the diseases usually ascribed to the inhalation of dust. The penetration of dust-particles in the deeper and deepest air channels of the whole respiratory tract must be a very difficult matter indeed, because there are so many normally disposed bars to it. The bronchial tree itself is composed of many canals variously and complexly curved upon themselves and placed more or less at angles to each other, while the caliber steadily decreases beginning with the trachea. To assume that dust-particles move along the axis of such a tortuous system of passages, whether the force be expiratory or inspiratory, is undoubtedly an error. As a matter of fact the dust probably impinges more or less constantly upon the walls at each turn and more especially upon the convexity of the curves. Such a path for it is therefore a resultant of the bend in the canal itself and its effect upon the dust-bearing currents. Thus it happens that the vast bulk of the dust in an air current rapidly comes into contact with the convexities of these tortuous channels and in a very devious route practically all of it meets the walls and, if these are moist, of course adheres when, as in the lungs these turns and angles are wonderfully multiplied, it soon follows that all the dust remains clinging to the walls. In a very similar way a long gradually narrowing tube tends to promote a deposit of dust upon its walls out of a current of air passing through it. From theoretical considerations and drawings and actual experiments the author enunciated the theory that in the lungs on account of the arrangement of the bronchial tree and the natural moisture of the mucosa dust does not penetrate very far. To substantiate this fact there are the observations that in those exposed to dusty air, the vast majority of the dust particles remain in the mouth and in the walls of the larynx. Similarly in the nose when its cavity is normally arranged a very large portion of the dust will be taken up. In spite of all these considerations the author does not deny the fact that dust does occasionally reach the terminal bronchi and the alveoli of the lungs. This he was able to demonstrate in an experimental way and describes the causes as follow. With abundance of dust and an unhealthy, superabundant, rather watery bronchial secretion and with at the same time an excitement of the respiratory function, in such a manner that the inspiratory effort is stronger than the expiratory, it slowly transpires that the dust-laden air charges the secretion, and this is by degrees drawn more and more into the smaller and smaller bronchi until finally the alveoli are reached.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Held April 2, 1901.

The President, Joseph Collins, M.D., in the Chair.

Recurrent Oculomotor Palsy.—Dr. William M. Leszynsky presented a woman, twenty-nine years of age, whom he had first seen four months ago. When six years old she had begun to have attacks of headache confined to the right temporal and supraorbital regions, and invariably accompanied by vomiting. The attacks occurred every five or six weeks. At her twelfth year the customary paroxysm had been associated with ptosis of the right eye, from which she had recovered in two weeks, the migraine continuing to recur as before. The second attack of oculomotor paralysis had occurred in her nineteenth year, with the same pain and vomiting. There were partial ptosis, diplopia and inability to look upward with the right eye. She had improved in three weeks, but the eye did not move upward as well as before for a few months and then there had been complete recovery of motility.. The third attack had occurred in her twenty-second year, and had been characterized by almost complete ptosis, outward deviation of the eye and diplopia. She had been obliged to keep the eye covered for three months, but had recovered in about a year. The fourth attack had been two and a half years ago and the fifth only three weeks ago. She now complained of the eye turning outward and of her inability to look upward. The periodical headaches bore no relation to menstruation. Examination showed slight drooping of the right upper eyelid, paralysis of the superior rectus and paresis

of the inferior and internal recti. The right pupil is 5 mm. in diameter and rigid, while the left measures 3.5 mm. and reacts normally. Vision is normal in both eyes, and the fields and fundi are normal. She is anemic and neurasthenic. The family history was unimportant, and her ocular condition had practically remained unchanged since the first examination. The speaker said that the most interesting features were the comparative rarity of this type of oculomotor palsy and its pathology. Only two authentic cases of recurrent oculomotor palsy had been studied postmortem, one by Richter, in 1887, and the other by Karplus, in 1895. In the former, a fibrochondroma existed in the course of the nerve trunk at the base of the skull, and separated but did not destroy the nerve fibers. In the other case, there was a neurofibroma of the motor oculi at the base. In many of the reported cases complete recovery had taken place, but in others the paralysis had gradually increased during the intervals, and had ultimately become permanent. Dr. Leszynsky said that he had seen four other cases. In the first, there had been complete paralysis of the third nerve with a clear history of accompanying migraine. Recovery had been spontaneous.

Dr. B. Sachs said that these cases were extremely rare, though he had been fortunate enough to see two in the past six months. One had been in a boy of four years who within a year had had two distinct attacks of oculomotor paralysis of one eye. He had recovered in a few months from the first attack. The family history was entirely negative. He understood that improvement had followed the second attack. There had been apparently no migraine here.

Dr. Leonard Weber said that he had presented a case of this kind to the Society twelve or more years ago. The man had oculomotor palsy on the right side. He had watched the case for a number of years. After about two years there had only been a little ptosis remaining. After a course of iodine the man had greatly improved, and had ultimately died of pulmonary tuberculosis.

Dr. B. Onuf said that he had presented such a case to the Society one year ago. The patient had since been given iodide of potassium in increasing doses, and had moved to the country. The attacks had become shorter and less severe. He did not believe that there was always a lesion of the oculomotor alone. His own case was undoubtedly one of migraine.

Dr. Leszynsky said that a very novel theory had been brought forward regarding this paralysis occurring in connection with migraine. It had been assumed that there is an increased vascularity of the hemisphere during the attack of migraine, causing a disturbance of the function of the third nerve.

Malignant Tumor of the Shoulder Perforating the Spinal Canal.—Dr. Leonard Weber read this report and presented the specimen. The subject was a man of thirty-one whom he had first seen in 1891. He had presented the usual symptoms of a recent syphilis, and had been treated for this with improvement. In 1894 he had returned because of a perichondritis of the cartilaginous portion of the nasal septum. At this time a small movable tumor, the size of a cherry, was noted in the right shoulder. This was supposed to be gummatous. The tumor diminished under mixed treatment, but a small nodule remained. In June, 1900, the man had sought relief because of a hard, solid and almost immovable tumor of the shoulder, which he said had developed shortly after a blow on the shoulder received one year previously. No benefit had resulted from rapidly increasing doses of iodide or from the biniodide of mercury. Three months later a portion of the growth was submitted to microscopical examination, with the result that it was declared by two pathologists to be a round-cell sarcoma. An effort had then been made to remove the growth, but this had been found impracticable. Injections of arsenite of soda and carbolic acid had been given for a time, but without benefit. On December 3d he had been admitted to St. Mark's Hospital because of a suddenly developed paraplegia. Bed-sores soon formed and he became septic, and died on February 11, 1901, from exhaustion. The tumor and a portion of the spinal cord were removed postmortem. The tumor was found to lead into the spinal canal. The cord symptoms in this case were due to hemorrhage and degenerative myelitis. As to whether the little tumor first felt in the shoulder was specific, the speaker said that this was probable, and added that the case emphasized the desirability of removing apparently innocent tumors at an early stage.

Cerebellar Apoplexy with Autopsy.—Dr. Weber also made this report. The patient was a man, twenty-nine years old, living amid the most unsanitary surroundings. The urine had a specific gravity of 1,024, and contained a slight trace of albumin and some hyaline and granular casts. There was no history of syphilis. He had been sick for about two months before coming under observation on September 11th. There was constant headache, but no sensory or motor disturbances. The diagnosis seemed to lie between tumor, hemorrhage and abscess of the cerebellum. On account of the length of time that he had been sick abscess seemed to be more probable than hemorrhage. He died in a few days, and at the autopsy the entire venous system was found engorged with blood. There was marked hypertrophy of the left side of the heart; no endarteritis of the arch of the aorta; both kidneys were slightly enlarged, the cortex showing proliferation of connective tissue in patches and presenting the gross appearance of interstitial nephritis. No opportunity was given for

microscopical examination. In the substance of the right cerebellar hemisphere was an accumulation of both recent and old coagula, and the apoplectic focus had ruptured into the fourth ventricle. He had seen one case of cerebellar apoplexy in a girl of twenty-five years, who had an unsuspected and untreated syphilis.

Tumor of the Optic Thalamus.—Dr. Joseph Fraenkel presented this specimen, which had been taken from a patient whom he had shown to the Society in January, 1898. At that time the boy had had the cardinal symptoms of brain tumor and a paralysis of the face which was very marked when there was any emotional disturbance. There had been no hemianopsia. The boy had been discharged from the Montefiore Home, and had done fairly well for two years and a half. When readmitted, there had been very nearly the same symptoms as before, and in addition a much more marked unsteadiness of gait and a disposition to fall to the right side. Dr. Fraenkel said that he had been led to think it possible that the tumor was after all situated in the cerebellum. On removing the brain at autopsy, a very old cyst was found on the fourth ventricle, the exact nature of which had not yet been determined. There was also a large tumor occupying the right optic thalamus.

Fracture Dislocation of the Cervical Spine.—Dr. Edward D. Fisher reported this case and presented the specimen. The patient was an acrobat, twenty years of age. While turning a somersault from the shoulders of a companion he had fallen a distance of about five feet, and struck on his head. He was instantly paralyzed. When seen by the speaker that evening there had been complete anesthesia from below the nipple extending down the arms to the armpit, and on the inner side of the arm and forearm, and taking in the ring and little fingers. There was complete loss of motion and paralysis of the bladder and rectum. The reflexes, superficial and deep, had been completely lost. Permission could not be obtained for operation until three days later, and in the meantime there had been a temperature range of 104° or 105° F. The operation had had been done by Dr. B. F. Curtis under cocaine anesthesia; and the laminæ of the fifth, sixth and seventh vertabræ removed. No evidence of injury to the cord could be discovered. The man died three days later. The autopsy had revealed a fracture of the body of the seventh vertebra, no subdural hemorrhage, but marked softening of the cord at the seventh cervical segment. There was very little gray matter left in the cord at that level, and there was very little evidence of hemorrhage into the cord proper. A very prominent symptom had been the extreme pain experienced along the course of the nerves. The classical distribution of the paralysis and the complete loss of reflexes were interesting features.

Dr. B. Sachs remarked that twenty years ago it had been pointed out that a very significant symptom of tumor of the optic thalamus was this peculiar facial palsy made visible by emotion.

Dr. Leszynsky said that he had seen recently a case of dislocation in the dorsal region with loss of reflexes and paralysis below the seat of injury. An operation had been done, but death had followed. The autopsy had revealed a complete transverse destruction of the cord.

Dr. Fraenkel said that some time ago he had presented a paper to the Society on this matter of the reflexes, and had continued to give a good deal of attention to this subject. He would assert that the skin reflexes are not lost in total destruction of the cross section of the cord, and the relation of the tendon reflexes to the skin reflexes should enable one to decide whether or not the cord has been completely destroyed in this manner. When the compression of the cord was sufficiently great to interfere functionally with conduction upward and downward, the tendon reflexes are lost while the plantar reflexes are exaggerated. When, however, there is structural disease of the entire cross section of the cord, the plantar reflexes are also lost. This he considered a valuable point in the differential diagnosis. He had reported two cases with autopsies in which there had been loss of reflexes without total abolition of the conduction in the cord.

Dr. Leszynsky said that in the case he had just referred to all forms of reflexes had been abolished, both superficial and deep.

Brain from a Case of Epilepsy Operated Upon.—Dr. H. L. Winter exhibited this specimen, which had been taken from a child of seven years. All of the head measurements were small; there was no paralysis of any of the muscles. The child was imbecile and had epileptoid seizures which appeared to be general. Dr. Stewart had operated upon the child at Bellevue Hospital. On reaching the brain a large cyst cavity had been found in the left hemisphere. The child died seven days later with a high temperature. The hemisphere was found to have been nearly destroyed by the cyst, and the convolutions were not well marked. The interesting feature was the almost complete destruction of the hemisphere without any paralysis. The fibers of the medulla were found not to decussate as freely as usual.

Abscess of the Brain.—Dr. Joseph Collins presented this specimen. It had been impossible to make a localizing diagnosis. The patient was a man, twenty-seven years of age, a tailor by occupation. Two weeks before admission he had been suddenly seized with severe and more or less paroxysmal headache distributed over the whole head. The pain was almost intolerable for six days, and then he became dizzy and had projectile vomiting without nausea. There had been some whistling sound

in the right ear. When seen by the speaker, four days after coming into the hospital, there was double choked disk, but no hemianopsia. There was no leucocytosis, although the hemoglobin percentage was 36. Apparently there was no impairment of hearing. The knee jerks were normal. There was no evidence of palsy or of spasm in any part of the body, and no symptoms referable to the special senses. The patient died four days later of exhaustion. The autopsy revealed an abscess situated in the right hemisphere, and involving particularly the posterior end of the inferior parietal lobe and of the superior parietal lobe. The cuneus itself was partly implicated. The tit-like extremity of the cuneus, it should be noted, was entirely intact on the side of the abscess cavity, and if the optic radiations are not cut across it would not be difficult to explain the absence of hemianopsia. A diagnosis had been made of abscess of the right superior parietal convolution.

Dr. Fisher said that both the superficial and deep reflexes had been absent in his case, and it was because of this that he had inferred that there was complete destruction of the cord. The operation had been undertaken to relieve the intense pain.

HARVARD MEDICAL SOCIETY OF NEW YORK CITY.

Stated Meeting, Held March 21, 1901.

William B. Coley, M.D., Chairman Pro Tem.

The paper of the evening was read by Dr. Charles Schram. Its title was:

Cerebral Apoplexy, Its Relation to Testamentary Capacity.—It will appear in a subsequent issue of the MEDICAL NEWS.

Cerebral Apoplexy and Property Conveyance.—Dr. Reynold W. Wilcox said that he had an experience with regard to cerebral hemorrhage and the exercise of legal intellectual capacity some four or five years ago. The patient, a man of over fifty, was brought into St. Mark's Hospital in a state of coma as the result of cerebral hemorrhage. The right side of the face and the right arm and right leg were paralyzed. There was also aphasia. The patient recovered his speech only sufficiently to give forth alternate volumes of profanity and obscenity. There was a history of previous alcoholism extending over a long time. For eight or ten days after his admission to the hospital the patient's condition remained about the same. Gradually he recovered some motion in his right leg, but practically none in his right arm. His power of speech did not improve. On the eighteenth or nineteenth day after the stroke he was supposed to have executed a bill of sale of his business down on the East Side of New York City to a woman to whom he was not related, but with whom he had been living for some years. On the twenty-fifth day after his stroke the patient became even more violent than usual and had to be removed to Bellevue where he died three days later. At the autopsy a large hemorrhage was found in the brain and the cerebral tissue was found to be badly torn as the result of the violence of the hemorrhage. It was evident that the original hemorrhage had been very severe and that the consequent pressure upon the brain was sufficient seriously to hamper all higher functions.

Legal Decision as to Capacity.—The patient's sister as executrix of his estate took the matter of the bill of sale into court, claiming that the patient had not been capable as far as his mental capacity was concerned of properly executing any such instrument. Dr. Wilcox was asked to testify as expert in the case. As the patient's right hand was paralyzed at the time when he was supposed to have executed his signature, as he understood very little of what was said to him, and even that without much assurance of his mental clarity, and as he was constantly in an excited condition during his stay in the hospital, the only expert opinion possible was that the patient was not legally capable of making the transfer. After consultation on the part of the defendant's counsel, it was decided to withdraw the suit.

Contracts and Wills.—Dr. Charles Schram in closing the discussion said that the courts are much more lenient in their decisions as to testamentary capacity, than as to the mental capacity necessary for making contracts. The evident purpose of the law is to make it as easy as possible for a man to convey his property to the heirs whom he desires to have it. On the other hand, the formalities connected with contracts are surrounded with many technicalities intended to protect the weak-minded from the fraudulent efforts of shrewd friends or enemies.

While motor aphasia is accompanied by least intellectual disturbance, there are other mental conditions which often develop as the result of the lesion causing the motor aphasia. A man may be perfectly dumb, or unable to utter but a few simple words, and yet be perfectly able to understand words when written or to even to show by writing himself that he understands words spoken to him and can convey his thoughts. In these cases, of course, he is perfectly responsible. In a number of cases the courts have decided that wills made under such circumstances are perfectly valid. With regard to the question of contracts, there are not many decisions in this matter. There is no doubt, however, that courts would require more detailed evidence as to the mental capacity of a patient when a contract's validity was in question than when only a will was involved.

The Physician's Duty.—The physician's safeguard in this matter is to have other doc-

tors see the patient and to have a detailed account of his actions carefully written down so that the Court can judge for itself of the testator's or contractor's capacity. Where there is much wealth involved other physicians should be permitted to see the patient independently, and be allowed to form their judgment without knowing the opinion of other experts in the case.

Ascites and Malignant Abdominal Tumors.—Dr. Henry C. Coe said that he has had five or six cases in the last six weeks in which the question of a connection between ascites and malignant tumors, or the development of malignancy in tumors that were previously benign has been one of the elements of diagnosis. He has been accustomed to consider ascites as a rather important symptom, or at least, suspicious sign of malignancy. One of his first cases was a woman of seventy who had suffered from a series of gynecological troubles, most of them connected with an old abdominal tumor. She developed ascites, which became so annoying as to require tapping. Her respiration was so much interfered with that when the ascites began to redevelop, operation was considered. Dr. Coe thought that under the circumstances operation was contra-indicated. He feared to find a rather extensive carcinomatous condition. He refused at first to operate, but was practically forced to do so by the family physician. He found a large adenocystoma of the ovary which he removed and the patient made a good recovery.

Ascites in Benign Tumors.—Dr. Coe's second patient the woman of forty-five, colored, who developed ascites after running down in health and becoming emaciated. The underlying conditions seemed surely to be malignant. On operation a hard tumor of the ovary was found with a number of nodular growths on the intestines. These nodules seemed to be surely secondary malignant growths and the whole picture gave the impression of cancer. Some of the smaller tumors occurred on the periphery of the large tumor making an interesting, knobby picture. The smaller growths proved to be mainly tubercular enlargements of glands and tuberculous nodules.

In a third case an abdominal tumor had been present for fifteen years. Ascites developed rapidly and some evening temperature was noted. The diagnosis was either malignant tumor or a supprating fibrocystoma. The operation showed that the tumor was a fibrocystoma, the contents of which had turned to pus These cases serve to show that it is extremely difficult to decide in any given case whether malignancy is present in the case, or not.

In a fourth patient, aged thirty-six years, ascites had developed about two months before she came under Dr. Coe's observation. This developed rapidly and as a consequence produced marked dyspnea. For this she was tapped several times. The operation showed that she was suffering from double cystoma of the ovaries, the tumors being papillomatous in character. The patient made a good recovery and has continued well ever since.

Significance of Ascites.—Dr. Egbert H. Grandin said in the discussion that the presence of ascites is not necessarily significant of malignancy. When even benignant tumors persist for a long time they often cause the development of copious ascites. Tuberculosis of the peritoneum is usually accompanied by ascites. This is prone to occur in corpulent women, in whom the presence of tuberculosis may not be suspected. As a rule the absence of distinct tumor, taken in connection with ascites, means tuberculosis. Dr. Grandin has seen some cases in which malignant disease of the ovaries finally led to the diagnosis of ascites and this brought the patients to the surgeon. As a rule, however, ascites cannot be spoken of as in any sense pathognomonic of malignancy.

Secondary Carcinoma and Ascites.—Dr. William B. Coley said that the development of a secondary cancer of the intestine, as when, for instance, there is metastases from the breast, often produces ascites. On the other hand, in the cases that have been under his observation, primary cancer of the intestine has not produced ascites. Ascites is more frequently seen with tuberculosis of the peritoneum than with any other condition. The presence of ascites should usually lead the surgeon to suspect the presence of tuberculous glands in the abdomen or even a more extensive tuberculous process.

Mechanism of Ascites.—Dr. George E. Brewer said that ascites is usually caused by the involvement of a gland in some pathological process, which causes it to enlarge and press upon the superior or inferior mesenteric vein. Enlarged glands are usually due to malignant disease or to tuberculosis. The presence of ascites, then, usually indicates either cancer or tuberculosis. In most cases, however, the enlargement of glands is apt to be tubercular.

Teratomata.—Dr. Coley presented specimens of a teratoma of the testicle which had been removed from a patient twenty-seven years old. No enlargement of the testicle was noticed up to eight months before the operation. There was no injury in the history and no tuberculosis in the family. There was no suspicion and no history of syphilis. The tumor grew slowly and gave no pain. At the end of eight months it had grown to the size of an orange. On removal it proved to be a teratoma of the testis, evidently deserving this name, since in it could be demonstrated all three of the germinal layers of the original embryonic tissue—epiblast, hypoblast, and mesoblast. At times, of course, such tumors prove to be malignant. When a number of

such cases are followed, it is surprising how often it will be found that notwithstanding prompt and supposedly complete removal, the tumors recur in the cord higher up, or within the abdomen and cause death.

Theories of Causation.—Various theories have been offered for the explanation of the origin of teratomata. One theory supposes that two ova were originally impregnated and only one developed. The undeveloped one later receives an impulse that causes it to produce a teratomatous growth. A second theory is that by some accident certain cells became split off from the original germ cells before they had developed very far. It is well known that if when the germ contains but two cells, one of them be destroyed an animal will develop complete in all its parts, though the animal is smaller than it would otherwise have been.

Hypothetic Partial Hermaphroditism.—A third hypothesis supposes that partial hermaphroditism exists in these cases and that some of the opposite sex cells included in the genital organs become impregnated and produce the teratomatous growth. Certain large cells have been pointed out as existing in some testicles, which were considered to be primordial ova. Other observers, however, consider these large cells as nothing more than connective tissue corpuscles. This hermapthroditic theory would explain better than any other the fact that most teratomatous tumors develop about the age of puberty. These tumors, however, are known to occur much earlier. They have been reported as early as three and eight months. It is doubtful too if hermaphroditism would be required since the pathogenic impregnation of the ova seems not impossible according to modern observation.

Terminology of Teratoma.—Dr. Frederick R. Sturgis said that there is some confusion as to the application of the term teratomata. This name properly should be applied only to such tumors as contain hair, skin, bones, etc., that is, representatives of all the tissue of the human body. Of late, however, the tendency has been to call all tumors of the testicle or ovary, which contain tissue that may originate from the three original germ layers, teratomata.

With regard to the malignancy of these tumors, Dr. Sturgis considers that many of them seem to become malignant because they were originally secondary malignant tumors, there being other malignant tumors in the body. In a case under his own observation the patient had suffered an injury to his testicle while riding on his bicycle. At the time swelling and pain developed. Later a painless tumor grew. Notwithstanding careful removal of all tissues that seemed to be involved, the patient died from carcinomatous infiltration of the lumbar gland. After his death, a bit of history became known that had not been known before, namely, that he had been injured severely in the abdominal region, some years before the bicycle injury to his testes. It seems probable that the first injury caused the development of an abdominal malignant tumor which gave a metastasis later to the testicle because that organ had lost some of its resistive vitality as the result of injury at the time of the bicycle accident.

Expectation of Life.—Dr. Curtis said that the average length of life after the development of a teratoma is from two to three years. The sooner operation is performed after the general character of the tumor is recognized the longer is the expectation of life. At the best, however, the prognosis is rather hopeless. The custom generally is not to consider these tumors as very malignant. But any one who has followed up a series of cases knows that they almost invariably terminate fatally by post-operative recurrences of true malignant type.

Indications for Operation.—Dr. Eugene Fuller said that it is a good rule to remove anything in the testicular region that develops rapidly. There is always a marked tendency to malignant degeneration in these tissues. To wait for assurance of diagnosis is often to waste valuable time. Where there is not a reasonably good suspicion in the history of syphilis or tuberculosis, even the therapeutic tests for these chronic pathological processes may prove not only futile, but almost fatal to the patient. In one case recently, Dr. Fuller kept a patient for two weeks on the iodide in order to assure himself that the tumor was not a syphiloma. The patient himself insisted that he had not had syphilis. The intra-abdominal glands rapidly became involved and, though the testicle and cord were removed completely, the patient died from recurrence not long after the operation.

Danger of Recurrence.—In closing the discussion Dr. Coley said that with regard to refinements of nomenclature he was not well enough up in the anatomical details of the subject to discuss them. When the three representative tissues of the germinal layers occur in a tumor, there seems to be an agreement among the pathologists that it shall be called a teratoma. Hence the name given to the tumor in the present case. The surgical indication for these cases is removal of the tumor as soon as it is discovered. Even though the malignancy of the removed tumor may be doubtful, one can look for recurrence. Almost inevitably recurrences take place. There seems to be a virulent malignancy about these growths that causes seeds of them to be disseminated widely and at some distance from the original tumor. The removal of the whole tumor, then, becomes in most cases a practical impossibility.

Sarcoma of Testicle.—Dr. Coley has seen

sixteen cases of sarcoma of the testicle, that is, of the tumors he considers primary. In one-half of these there was some antecedent injury in the history. As a rule, there was but a very short interval between the subsidence of the acute traumatic symptoms and the development of the malignant tumor. In the case of the teratoma presented, four weeks after the tongue of a wagon had produced the injury, a round tumor developed. Though it was considered at first to be non-malignant the testicle was removed and with it the cord up to the internal ring. Despite this wide removal of tissue death took place three months later as the result of the development of a tumor in the kidney. Two microscopic examinations of the original tumor removed from the testicle seemed to show that it was not malignant and at most only a granuloma. Repeated examinations aroused the suspicion of round-cell sarcoma. The tumor which developed in the kidney proved to be a round-cell sarcoma.

Bicycle and Malignant Testicular Tumor.—In three of the sixteen cases of primary sarcoma of the testes which Dr. Coley has had under observation the injury which led up to the development of the sarcoma came as the result of bicycling. There is no doubt that acute trauma either serves to arouse dormant connective tissue cells, or else so lowers the resistive vitality as to permit the irritant which causes the tumor to secure a favorable opportunity for lodgment in the tissues. Connection between the injury and the malignant tumor in these cases is undoubted. With regard to the idea advanced by Dr. Curtis that some of the teratomata develop as secondary growths to some malignant tumor within the abdomen, it would seem much more straightforward to consider the testicular tumor primary. The teratomata develop in young and healthy men, who have previously had no abdominal symptoms and they come as the result of direct injury to the testes.

BOOK REVIEWS.

MEDICO-SURGICAL ASPECTS OF THE SPANISH-AMERICAN WAR. By Lieut.-Colonel DR. NICHOLAS SENN. American Medical Association Press, 1900.

THE book is a series of letters written evidently in haste by Dr. Senn from his various posts of duty during the war, and is illustrated with photographs of prominent generals and army surgeons and with views of places.

Most of the letters are made up of rhetorical descriptions of scenes and places, and here and there are to be found instructive comments, such as would naturally be made by a keen medical observer, and there are a number of entries embodying conclusions, which the writer's experiences especially fit him to make, such as those on the "First Aid Packet," the training demanded for an army surgeon, and the surgical operations most frequently necessary for an army corps.

PHYSICAL DIAGNOSIS IN OBSTETRICS. By EDWARD A. AYRES, M.D., Professor of Obstetrics in the New York Polyclinic; Attending Physician to the Mothers' and Babies' Hospital. E. B. Treat & Co., New York.

DR. AYRES says that his manual of physical diagnosis in obstetrics aims "to represent on paper, and with more careful expansion of statement than could be given in daily verbal instruction by the side of the patient, the clinical study of obstetrics, as the author has been accustomed to pursue it with his classes in hospital and dispensary work." He thus sets himself a very high standard, as his many students will readily recognize. He has not, however, failed to reach his standard. He has made a very practical and useful manual for the practitioner.

The following statement with regard to antepartum examinations is of special interest, because it is often urged that they are infeasible in private practice. By laying stress on such points as determining the time of labor and with many the sex of the child, and the value of forseeing difficulties and thereby avoiding them with the more seriously inclined, it is rare that ready permission is not gained to make antepartum examinations if care is taken to avoid needless exposure.

There are many points in the book that are indicative of Dr. Ayres' very practical methods of teaching.

THE ESSENTIALS OF PRACTICAL BACTERIOLOGY. An Elementary Laboratory Book for Students and Practitioners. By H. J. CURTIS, B.S., M.D. Longmans, Green & Co., London, New York and Bombay.

THIS is an excellent manual for the laboratory student, and it can be most heartily commended as being small in size, reasonable in price and accurate in statement. While there are plenty of such manuals now published this can be singled out as belonging to the best class of this type of work.

THE NURSING PROFESSION. HOW AND WHERE TO TRAIN. By SIR HENRY BURDETT, K.C.B. Third Year. The Scientific Press, London.

THIS is a compact and thoroughly reliable guide for the aspirant who desires to take up the vocation of trained nursing. Unfortunately the information bearing on schools in the United States is very meager, the majority of the described training schools being in England, Ireland, Scotland and on the Continent.